FIFTY CENTS

Kent-Coffey Design Broadens Markets

MC—Your Key to Improved Profits

OCTOBER 1960

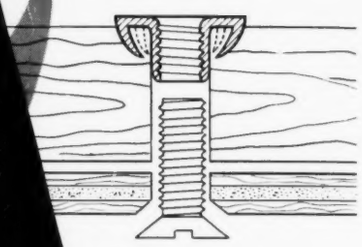
Facts About New Finishield Construction

Complex Art of Contour Molding

FDM

Furniture Design & Manufacturing

6 NEW prong TEENUT®



Note how prongs toe-in after Teenut is driven into hole. Toe-in action plus multiplicity of prongs increases push-out resistance far beyond that of other pronged fasteners.

gives you greatly increased push-out resistance

Here's an easily concealed threaded fastener that's built like a miniature bear-trap . . . with six claw-like prongs that penetrate, toe-in and grip so tight you really have to pound it to back it out of its hole.

With the new 6-prong Teenut, you'll cut your rejection rate and eliminate that old problem of the "lost fastener" . . . because this is one pronged nut that stays where it's put.

Full engineering details and prices on request. Currently available in the following sizes: 8-32, 10-24, 10-32, ¼-20, 5/16-18.

CARR FASTENER COMPANY

Division of United-Carr Fastener Corporation, Cambridge 42, Mass.

FURNITURE DOT FASTENERS

Offices in: Atlanta, Boston, Chicago, Cleveland, Dallas, Detroit, Kalamazoo, Los Angeles, Louisville, New York, Philadelphia, Syracuse

FOR DATA CIRCLE FDM NO. 1374

The new wood formed board

Duraflake

Helps you manufacture the best... faster and at lower cost.

Provides maximum Internal Strength and a Smooth, Flawless Surface

Duraflake is ideal for today's furniture. It is superior to other available boards.

The surface is smoother than other boards, eliminating the need for cross banding before overlaying. It is stronger because it is ingeniously formed. This new board has exceptional machining and screw holding properties. It is easy to work and handle.

Duraflake is the practical, superior wood formed board that will increase the quality and add value to your product. It will save you time and money throughout your manufacturing process.

These are Duraflake's Superior Features:

- Fine surface eliminates telegraphing.
- Excellent screw holding properties.
- Strong internal bond.
- Maximum dimensional stability.
- Tight core for outstanding edge and face cutting.
- Machinability.
- Superior modulus of rupture.
- Uniform density.
- 5' x 16' press for great latitude.
- Teco quality control.

Mail coupon today for Duraflake brochure or informations on specific application:

Wood Fibreboard Co.
P. O. Box 245
Albany, Oregon

FD-2

Please send me a sample of Duraflake and specific information on its use in _____

Name _____

Street _____

City _____ Zone____ State_____

Wood Fibreboard Company

P. O. Box 245 • Albany, Oregon
Telephone WAbash 8-3341 • TWX Alby 696

FOR DATA CIRCLE FDM NO. 1422

EDITORIAL | *It takes a "green thumb"*

We are all familiar with the fable of the two gardeners who used the same soil, seed and climate, yet one produced a more abundant crop. The successful tiller of the land was said to have a "green thumb."

We also know of furniture manufacturers who seem to be blessed with a "green thumb."

Whyfor this difference in results when conditions were virtually the same at the start? What are the elements of this "black magic" of the "green thumb?"

Is it because the more successful furniture manufacturer uses modern methods, has an up-to-date plant and efficient equipment?

Does he do an effective job of market research to determine what will sell and when? Are his salesmen more persuasive; is his sales manager more imaginative? His designers more creative?

Do his cost men have a sharper pencil; do his buyers make the wisest purchases?

Is he showing at the right markets to influence more of his best prospective customers? Are his advertising and publicity programs inspired and on target?

Is he alert to the latest supplier offerings and services? Is he availing himself of the helpful services of the industry's trade associations? Its publications?

Does he consistently seek and secure enough facts to make the right management decisions?

If we carefully analyzed, we would probably find the most successful do all of these things, and more.

Fact is, whether growing tomatoes or manufacturing furniture, the man with the "green thumb" uses no magic. He merely does 'most everything right.

Do you have a "green thumb?"

R. A. Helmers, Editor

FDM
Furniture Design & Manufacturing

OCTOBER 1960
VOLUME 32 NUMBER 10

The Management Publication Serving the Furniture Manufacturing, Upholstering and Bedding Industries

BPA *Member, Business Publications Audit of Circulation, Inc.*

Editorial Staff

EDITOR
R. A. Helmers

ASSOCIATE EDITOR
Alfred De Bat

ASSISTANT EDITOR
Carole Nadwidney

CONTRIBUTING EDITORS
Carl A. Rishell
Wood Technology
Leonard S. Simon
Upholstery Construction
Edward O. Fricker
Upholstery Fabrics
Victor A. Lennon
Management & Finance

CORRESPONDENTS
Carolyn Knuemann
Southeast

OUR COLOR COVER—

Modern provincial is featured in Kent-Coffey's Vintage collection, designed by John Van Koert. Inspiration for the setting comes from antique French pieces. Dulled pecan veneers in a warm cognac tone are used. Cover story starts on page 20. Also featured in this issue is designer Van Koert, page 16.

Business Staff

PUBLISHERS
Louis I. Lewis
Myron F. Lewis

BUSINESS MANAGER
David Shulman

CIRCULATION MANAGER
D. Bolnick

Advertising Representatives

CHICAGO:
WILLIAM H. SANKE
608 South Dearborn St.
Chicago 5, Ill.
WAbash 2-1272

NEW YORK:
S. L. BERLINER
50 E. 42nd Street
New York, New York
Murray Hill 2-6770

LOS ANGELES:
H. L. MITCHELL
1450 Lorain Road
San Marino, Calif.
CUmberland 3-4394

ATLANTA:
RICHARD S. KENDRICK
1302 Clairmont Road
Decatur, Georgia
MElrose 4-7893

Editorial and Advertising Offices

608 South Dearborn St.
Chicago 5, Ill.
WAbash 2-1272

Contents

REBEL WITH A MAGIC TOUCH
—by Carolyn Knuemann.....16

FDM Designer of the month.

BACK COATING UPHOLSTERY FABRIC
—by E. O. Fricker.....18

Fabrics and Fibers feature.

DESIGN PROGRAM BROADENS MARKETS FOR KENT-COFFEY—*by Carolyn Knuemann*..20

How a conservative, old line company embarks on a name-designer program.

COMPLEX ART OF CONTOUR MOLDING
—by Carolyn Knuemann.....26

Space age methods are used to create new designs through new materials.

M.C.—YOUR KEY TO IMPROVED PROFITS
—by Nancy Ladd.....30

Conclusion of a series explaining how higher profits can come from better management.

FURNITURE ENGINEERING.....**50**

WOOD TECH: FURNITURE CORE STOCK
—by Carl A. Rishell.....50

FINISHIELD CONSTRUCTION
—by Alfred DeBat, Associate Editor.....52

A new hardwood process protects veneer from stains, burns and abrasion.

MACHINE HYPNOSIS PERILS CARELESS WORKERS.....56

DOVETAIL SANDING MADE EASY.....58

JIG SPEEDS SANDING OF EIGHT-SIDED TABLE.....58

INFRA-RED CUTS OVEN TIME BY 92% AT BROYHILL PLANT.....60

FINISHING MACHINE OFFERS FULLY AUTOMATIC OPERATION.....61

DEPARTMENTS

- EDITORIAL 4
- MANAGEMENT DIGEST 8
- FUTURE DATES..... 62
- IT'S NEW..... 38
- FURNITURE ENGINEERING 50
- CLASSIFIED 66

FURNITURE DESIGN AND MANUFACTURING is published monthly by Graphic Arts Publishing Co. Suite 2109, 608 South Dearborn St., Chicago 5, Illinois. Phone WAbash 2-1272. Accepted as Controlled Circulation Publication at Chicago, Illinois. Subscription price: Single copy, 50c; one year $5.00. Foreign, $7.00 a year.

There's a deep-seated preference for **innerspring**

cushions among a large segment of the American public. People like the cushiony comfort, the stay-in-shape qualities of strong, resilient steel innersprings.

Make it pay for you. Use innersprings in your furniture . . . and tell people about it. Tell them with the point-of-sale materials shown at right. These materials put your dealers at the payoff point of our major national promotion: "Rest Best—Buy Innersprings." This promotion is now being featured on the *U. S. Steel Hour* and *I Love Lucy* television programs and has also been supported by advertising in such national consumer magazines as *Life, House Beautiful, House & Garden* and *Living for Young Homemakers.*

USS is a registered trademark

American Steel & Wire
Division of
United States Steel

Like to know more?
Send the coupon for free sample materials and an order blank to order in quantity.

WINDOW OR WALL BANNER

TENT CARD

HANGING MOBILE

PIN-ON FURNITURE STREAMER

Innerspring Promotion
American Steel & Wire
Dept. 0380, 614 Superior Ave., N.W.
Cleveland 13, Ohio

Please send your innerspring furniture materials.

Name_____

Company_____

Address_____

City_____ Zone____ State____

FOR DATA CIRCLE FDM NO. 1364

FDM FURNITURE DIGEST FOR MANAGEMENT

For more complete information on any of the Bulletins below, just circle the Bulletin Numbers on the READER SERVICE CARD which you will find elsewhere in this issue. A copy of the source material will be sent to you promptly.

Management Notes

THE AMERICAN HARDBOARD ASSN. has launched a concentrated promotional effort emphasizing hardboard products and services available only from name brand domestic manufacturers. Complementing the program is a new 16-page booklet, "A Pig in a Poke is Not for You", which tells the story of the American hardboard industry and contrasts an unknown product of unknown quality made by an unknown manufacturer with the advantages of brand-name domestic hardboard. *Bulletin O-150*

AN ANALYSIS OF FOREST PRODUCTS POTENTIAL in Arizona has been prepared by the *Division of Forestry of Arizona State College* and the *Arizona Development Board*. The study reports that Arizona's 17,000,000 acres of commercial and non-commercial timberland represents one of the greatest untapped industrial potentials in the southwest. It also states that despite the state's wealth of raw material, it has virtually no secondary wood products industries, which could be supported without depleting its forest resources. *Bulletin O-151*

TRUCK FLEET LEASING, featuring its merits and demerits, has been included in a 32-page study by the *Foundation for Management Research*. The booklet, entitled "Truck Fleets: Lease or Buy? An Analysis of Truck Transportation Costs", is based on data gathered from corporations operating 12,817 company-owned trucks and the records of national truck leasing companies. The booklet also includes an analysis of the different lease plans available, pointing out which are best for specific transportation problems. *Bulletin O-152*

INDUSTRIAL FINANCING SERVICES are contained in a brochure released by *Walter E. Heller & Co.* Titled "Financing Business Action Under Today's Conditions," the booklet describes modern industrial financing practice under headings as: Accounts Receivable Financing; Factoring; Inventory Loans; Equipment Loans; Industrial Sale and Lease Financing, and others. Company officials may receive a copy by circling *Bulletin O-153*.

NAFM SALES MANAGEMENT CONFERENCE will be held November 16 to 18 at Indiana University's Conference Headquarters, Bloomington, Ind. This is the fifth annual conference sponsored by the *National Association of Furniture Manufacturers* and co-sponsored by the Indiana University School of Business. *John M. Snow*, NAFM executive vice president expects an increased attendance at the 1960 conference due to the need for sales management planning to contend with increasing competition. Enrollment will be limited to 50. For further details, circle *Bulletin 0-154*.

SFMA Holds Meeting of Production & Cost Division

The Southern Furniture Manufacturers' Assn. held its semi-annual production and cost division meeting at Blowing Rock, N. C., August 26 and 27. Leading off the conclave was *V. K. Anderson*, Kroehler Manufacturing Co., Binghamton, N.Y., who spoke on "Accident prevention in the furniture industry," *James L. Williams* Burlington industries, Greensboro, N.C., also addressed the morning session on the topic of "Human relations in industry."

Richard M. Crossan, Serge A. Birn Co., Inc., Louisville, Ky., opened the afternoon session of the first day discussing "Work measurement and methods in the furniture industry." He was followed by *Dr. Richard F. Blomquist*, Forest Products Laboratory, Madison, Wisc., who reported on "What's ahead in glues for wood?"

The second day was devoted to a series of discussion groups. Topics and group leaders were: "Preventive maintenance"—*Phonse Bean*, White Furniture Co., "Control of indirect labor cost"—*Fount Rion Jr.*, Florida Furniture Industries, "Control of indirect material cost"—*T. E. Allen*, Thomasville Chair Co., "Opportunities for cost reduction in upholstery"—*Jack Rochelle*. Globe Furniture Co., and "Inspection and expediting of raw materials"—*John K. Adams*, American Furniture Co.

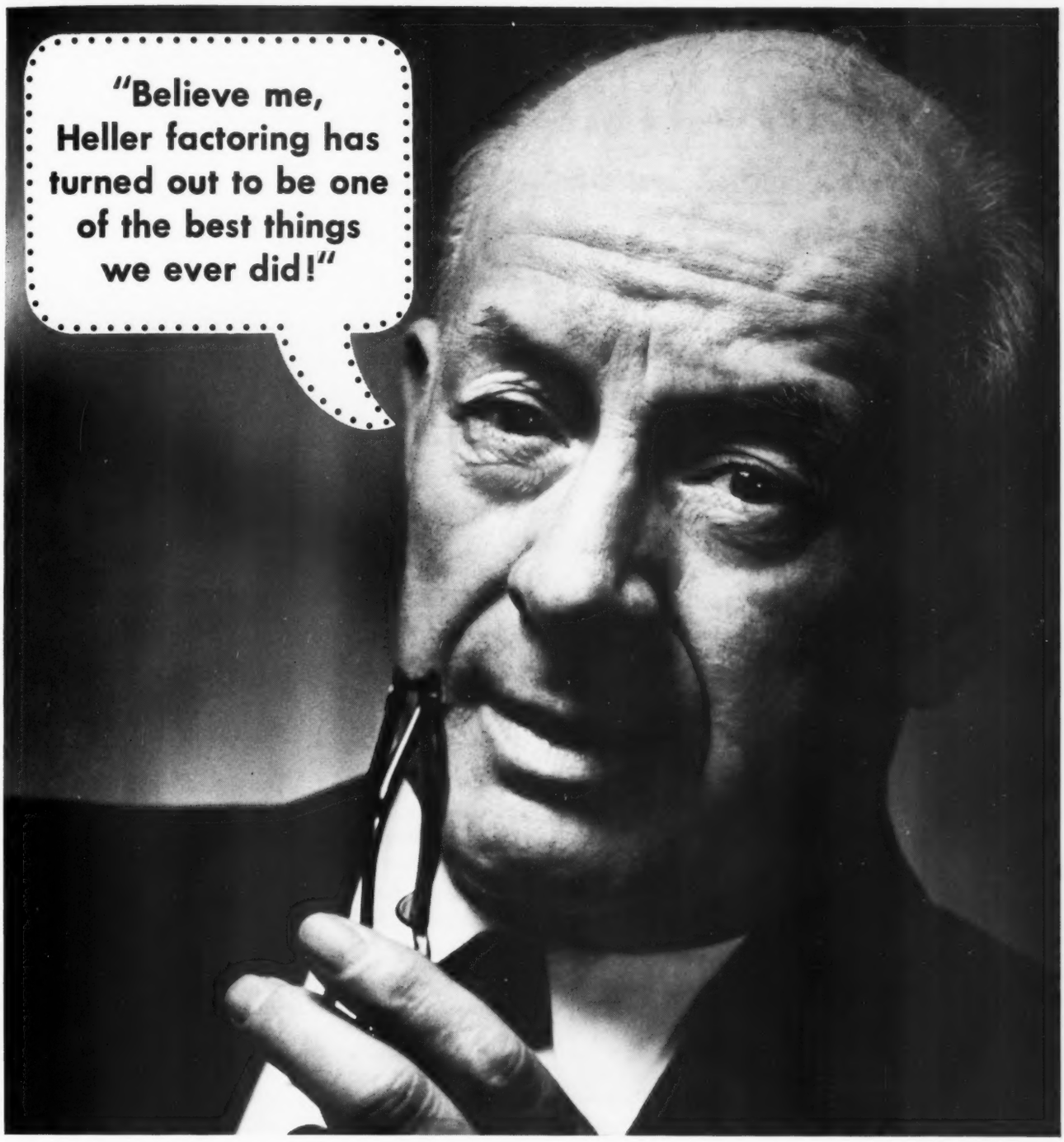
THE AMERICAN FURNITURE MART, Chicago, announced a new special services group which will work with various industry groups as manufacturers, salesmen, retail dealer associations and industry suppliers. The group is headed by *A. S. Andereck* and *P. K. Johnson* of the Mart's executive staff. Its purpose will be to develop a closer understanding of inter-industry problems in relation to constantly changing marketing patterns.

THE MAHOGANY ASSN. has extended the deadline date for its 1960 Retail Advertising Competition from July 15 to Dec. 15. More than 200 of the nation's most influential retail stores have been invited to take part. Entries will be judged on integrity, salesmanship-in-print, general layout and art, and forcefulness of headlines and copy, with emphasis on accuracy and honesty. The competition is an effort by the association to upgrade the quality of newspaper advertising of furniture.

LOWER SHIPPING RATES for feathers and down, in packages having a density of 12 or more pounds per cubic foot, is announced *by Lifschultz Fast Freight*. Less-than-carload rates have been reduced 65 percent by the firm which handles straight line shipments between the midwest through Chicago and Milwaukee, the east coast through terminals in Boston, Springfield, Mass., Providence, New Haven, New York, Bloomfield, N. J., Philadelphia and Baltimore, and the west coast through Los Angeles and San Francisco.

SOUTHERN FURNITURE MANUFACTURERS ASSN., Sales and Marketing Division, at its annual meeting at Blowing Rock, N. C. elected *Richard M. Simmons*, American furniture Co., Martinsville, Va., as president. Elected vice presidents were *Melvin Margolin*, the Berkline Corp., and *Jack Sheer*, Sanford Furniture Co.

TO PAGE 10



... Our principals now devote full time creatively to advancing the business, selling more, making more profits.

... No long wait for our money between buying materials, manufacturing, shipping, and eventual collection. Instead, cash-in-hand on every sale: cash for timely buying, for leveling production, for improving our competitive position.

... Just one account receivable, and due from Heller—not ledgers full of accounts. No credit and collection bother and expense. No bad debts.

... And Heller service is personal and immediate as if Heller were part of our own company ... You ought to know about Heller factoring. Just write for our informative booklet, "Profit through Factoring." No obligation, of course.

FD&M-10

One billion dollars annually for industry

WORKING FUNDS FOR INDUSTRY

Walter E. Heller & Company

105 W. ADAMS ST., CHICAGO 90
342 MADISON AVENUE, NEW YORK 17

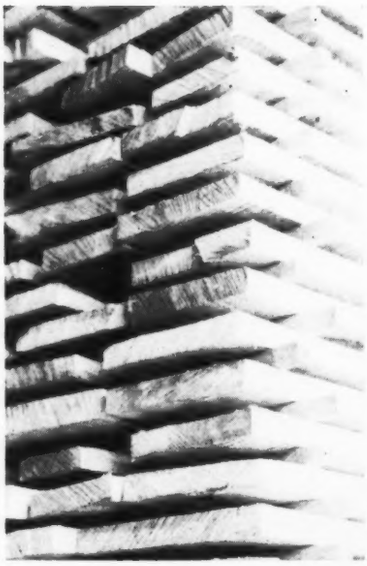
55 MARIETTA STREET, N.W., ATLANTA 3
WALTER E. HELLER & COMPANY OF CALIFORNIA
849 S. BROADWAY, LOS ANGELES 14

FOR DATA CIRCLE FDM NO. 1390

REDUCE LUMBER SEASONING TIME

with economical FAN-AIR System!

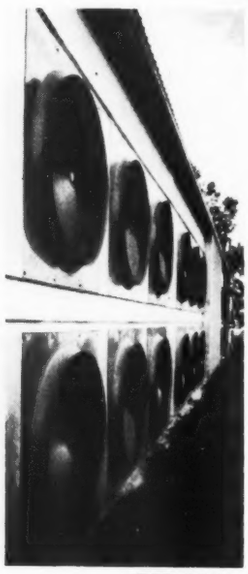
- **No Staining!**
- **No Twisting!**
- **No Checking!**
- **No Warping!**



FAN-AIR SYSTEM is custom engineered to your requirements to cut air-drying time to days, instead of weeks—reduces costly lumber inventory.

Controlled Air Flow!

OPTIMUM drying conditions are automatically controlled. Unique air-foil baffles carry gentle breezes to all lumber surfaces . . . air-drying green hardwoods in seven to ten days.



PROVEN IN USE—Developed over the years by Carlton Smith Industries, Inc., manufacturer of quality furniture panels, FAN-AIR Systems are now cutting costs for leading lumber processors. For further information, phone, write or wire—

FAN-AIR SYSTEMS

INCORPORATED

114 S. Wellington St., P.O. Box 2303
MEMPHIS 2, TENN.
JAckson 6-0784

Carlton Smith, Pres.; Abe Lemsky, Vice Pres.; T. J. O'Brien, Eng., Secy-Treas.

FOR DATA CIRCLE FDM NO. 1381

CONTINUED FROM PAGE 8

APPOINTMENTS

REGENCY PLASTICS INC., Woodside, L.I., N.Y. and *Great Bay Chemicals and Plastics Inc.,* East Brunswick, N.J., wholly owned subsidiaries of *Cary Chemicals Inc.: Herman Ratner* to vice president of both companies from sales manager of Regency Plastics.

FASSON PRODUCTS, Painesville, Ohio, manufacturer of self-adhesive papers, foils and films: *Robert G. Hamilton* to market development manager from industrial products sales manager and *William H. Burke* to decorative products specialist from assistant industrial products manager.

PRESTO PLASTIC PRODUCTS CO., New York city: *Norman L. Flewwellin* to director of merchandising and sales, from Imperial Chemical and Plastics Corp.

FIRESTONE RUBBER AND LATEX PRODUCTS CO., Fall River, Mass., div. of The Firestone Tire & Rubber Co.: *Richard A. Riley* to president, succeeding *C. J. McCready* who resigned.

FORESMAN RILEY WURDACK

MICHIGAN ABRASIVE CO., Detroit, manufacturer of coated abrasives: *R. J. Foresman* to vice president, from American Lincoln Corp. and Midwest Abrasive Co.

BECHIK PRODUCTS, INC., St. Paul, Minn., supplier of accessory items for the bedding and furniture industries: *Robert R. Wurdack* to representative in the west central states, with headquarters in Cedar Rapids, Iowa.

DECAR PLASTIC CORP. and DECARLITE, INC., Melrose Park, Ill., manufacturer of Decarlite plastic laminates and furniture tops: *Donald Periolat* to sales manager of both organizations, and *George Kirst* and *George Sanderson* to the sales staff.

BLOCKSOM & CO., Michigan City, Ind., manufacturer of curled hair products: *W. I. Spaugh,* sales representative, High Point, N.C. area, covering North and South Carolina and southern Virginia; *George Woods,* sales representative southeastern area, covering eastern Tennessee, Georgia, Alabama and northern Florida; and *Bernard Usselman,* sales representative, Philadelphia area, covering northeastern Pennsylvania, southern New Jersey, Delaware, northern Virginia, eastern West Virginia and the District of Columbia.

CHICAGO CURLED HAIR CO., Chicago, manufacturer of cushioning products: *John R. Durante* to regional sales representative for the southwestern states.

TO PAGE 12

IF YOU NEED 'EM... BURKART'S GOT 'EM!

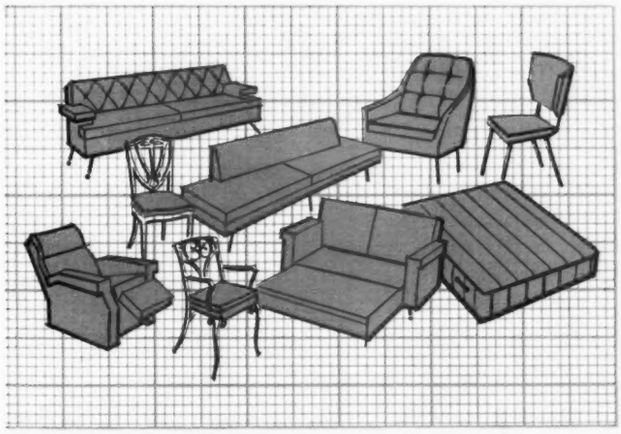
- ✓ SISAL AND COTTON COMBINATION—Combination pads with a soft cotton topper securely sewed to a sturdy sisal insulator pad.
- ✓ SISAL AND BURKAIRE* COMBINATION—Combination pads of strong sisal topped with soft shape-retaining Burkaire Pads.
- ✓ BURKART FOAM** AND BURKAIRE* COMBINATION—Layers of Burkart Foam and Burkaire to provide the finest in cushion comfort.
- ✓ BURKART FOAM** WITH SISAL CENTER—For reversible cushions—a layer of sisal with Burkart Foam top and bottom.
- ✓ BURKART FOAM** AND SISAL COMBINATION—A layer of strong sisal for super insulation topped with a soft layer of Burkart Foam.
- ✓ BURKAIRE* WITH BURKART FOAM** CENTER—Superior quality cushions with a center layer of Burkart Foam with Burkaire top and bottom.
- ✓ BURKAIRE* PADS — With slots already cut and shaped to pattern for chair backs of any design.
- ✓ JUTE PADS—Finest quality Jute Pads made in any weight—plain or with latex on one side.
- ✓ SISAL AND COTTON COMBINATION WITH BURLAP—Combination pads of sisal and cotton—burlap covered or with burlap skirts on one or more sides.
- ✓ BURKART FOAM** WITH BURKAIRE* CENTER—For shape-retaining cushions — a center layer of Burkaire with Burkart Foam on both sides.
- ✓ COTTON PADS—Cotton batts in rolls or cut to sizes and patterns. 100% new material in grades to suit all requirements.
- ✓ SISAL PADS—Burkart superior quality sisal pads—the perfect spring insulator. Made in any weight or thickness.
- ✓ SISAL PADS WITH BURLAP SKIRTS—Plain or latexed with burlap skirts on one or more sides—cut to pattern.
- ✓ TULA PADS—Curled hair and Tula Pads—latex impregnated pads cut to any size and thickness required.
- ✓ LATEXED SISAL PADS — The finest type of sisal heavily coated with latex on one side—permanently puncture proof.
- ✓ BURKAIRE* PADS—With channels already cut for immediate installation into tufted backs.
- ✓ BURKART FOAM**—Superior quality urethane foam in densities for your most exacting requirements.
- ✓ BURKAIRE* PADS—Exclusive with Burkart—100% new cotton linters impregnated with resin.

*BURKAIRE—*a resin-impregnated cotton pad which holds its shape permanently.*

**BURKART FOAM—*the superior quality new urethane foam.*

From one reliable source . . .

The greatest variety of cushioning ever offered the furniture industry!



Now . . . a specific cushioning pad for every purpose available from *one* dependable source: BURKART.

Note the check list above. There you will find Burkart cushioning material in every possible combination to save you time and money . . . and give you the best job every time.

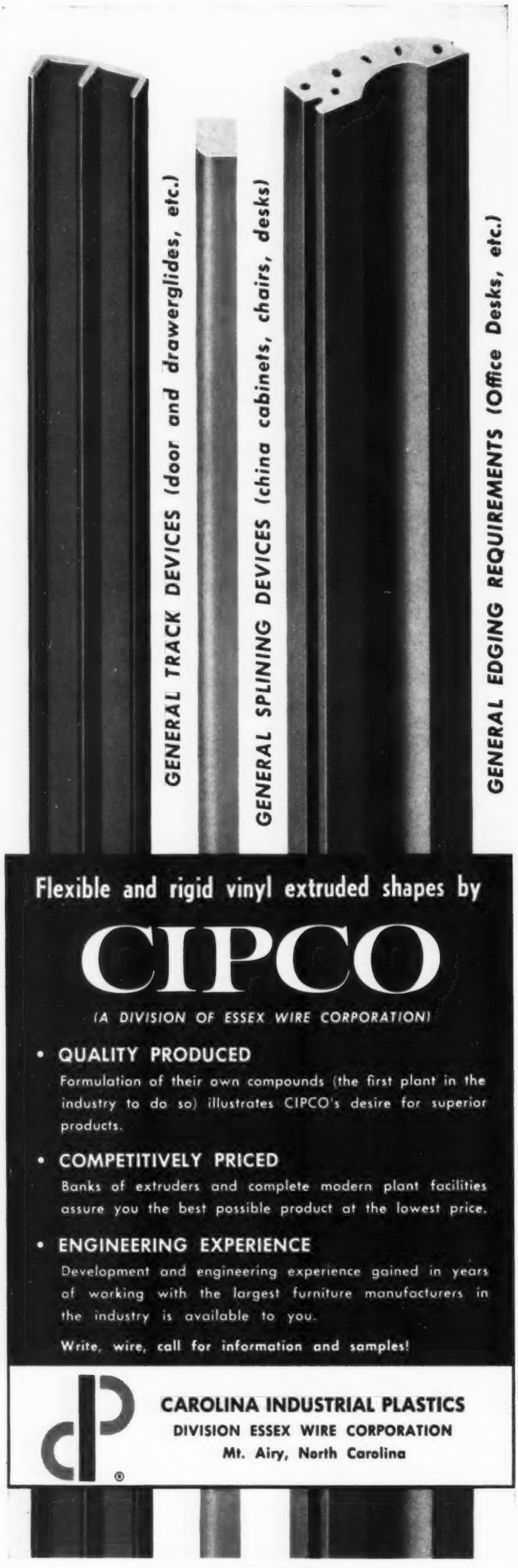
All of your insulating and cushioning problems can be solved by Burkart's wide choice of pads. Add to this the economy of getting pads tailored exactly to your requirements, and you see why Burkart is the name to specify when you want the *best* for any job, at the *right* price, from *one* source. Write today for additional information, or a visit from one of our skilled specialists.

BURKART PADS

F. Burkart Manufacturing Company, 4900 N. Second Street, St. Louis 7, Mo.

Philadelphia, Pa. • Oakland, Calif. • Cairo, Ill. • Carlisle, Ark. • New Orleans, La. • Henderson, N.C.

FOR DATA CIRCLE FDM NO. 1370


GENERAL TRACK DEVICES (door and drawerglides, etc.)
GENERAL SPLINING DEVICES (china cabinets, chairs, desks)
GENERAL EDGING REQUIREMENTS (Office Desks, etc.)
Flexible and rigid vinyl extruded shapes by
CIPCO
(A DIVISION OF ESSEX WIRE CORPORATION)
• QUALITY PRODUCED
Formulation of their own compounds (the first plant in the industry to do so) illustrates CIPCO's desire for superior products.
• COMPETITIVELY PRICED
Banks of extruders and complete modern plant facilities assure you the best possible product at the lowest price.
• ENGINEERING EXPERIENCE
Development and engineering experience gained in years of working with the largest furniture manufacturers in the industry is available to you.
Write, wire, call for information and samples!
CAROLINA INDUSTRIAL PLASTICS
DIVISION ESSEX WIRE CORPORATION
Mt. Airy, North Carolina
FOR DATA CIRCLE FDM NO. 1373

CONTINUED FROM PAGE 10

FAULTLESS CASTER CORP., Evansville, Ind.: *J. W. Allen* to sales representative, Cleveland territory; *D. Jack Reeves* to sales service representative, West Coast district; *Robert J. Brainard* to sales representative, Pittsburgh territory.

MARBON CHEMICAL DIV., *Borg-Warner Corp.*, Washington, W. Va.: *Dr. Wendell Moyer, Jr.* to group leader in exploratory research, from Union Carbide Co., and *Fred Schneider* to group leader in plastic applications and evaluations, from Firestone Plastics.

WEYERHAEUSER CO., Silvatek Div., Tacoma, Wash. appointed the following new panel products distributors: *Foxgal, Inc.*, Phoenix, Ariz.; *Stewart Building & Roofing Supply, Inc.*, Tucson, Ariz.; *Central Lumber Sales Co.*, Lincoln, Neb.; *Wadena Builders Supply, Inc.*, Wadena, Minn.; *Bacon-McMillan Veneer Manufacturing Co.*, Stockton, Ala.; *Thompson Swain Veneer Inc.*, Tuscaloosa, Ala.; *U. S. Plywood Corp.*, Little Rock, Ark.; and *H. E. Schiff Distributors Inc.*, Bronx, N.Y.

HARVARD MANUFACTURING CO., Cleveland, manufacturers of bed frames, elected *Melvin E. Roche* president, succeeding *Hillard J. Sands*, named chairman of the board.

Supplier Announcements

FORMICA CORP., Cincinnati, Ohio, manufacturer of plastic laminates, wall tile and adhesives, announced the appointment of *Aloha States Sales Co.*, 524 Cooke St., Honolulu, Hawaii, as distributor for its line of building products. *J. M. Lowson* is sales manager.

FORMETTE OF PHOENIX, Phoenix, Ariz., manufacturer of hot and cold plastic laminating presses, announced the following distributors: *Cabinet Supplier, Inc.*, 1449 Washington Ave., Huntington, W. Va.; *Central States Machinery Co.*, 2131 59th St., St. Louis, Mo.; *Martin Lumber Co.*, 983 Page Blvd., Springfield, Mass.; *Mechanics Lumber Co., Inc.*, 55-11 Queens Blvd., Woodside, N.Y.; *Fessenden Hall, Inc.*, Third and Norris St., Philadelphia, Pa.; *Tafel Electric Co.*, 33 E. Brandeis, Louisville, Ky.; and *Parkwood Distributing Co.*, 1346 W. Cedar St., Denver, Colo.

THE OCTOBER CO., Easthampton, Mass., manufacturer of furniture drawer accessories has expanded its factory and sales facilities with the purchase of a building at 15 Ward Ave. The firm also appointed *David Ramey* and *Bill Googe* as sales representatives in Virginia, North and South Carolina, Georgia, Alabama, Tennessee and Florida, with headquarters in Winston-Salem, N. C.

NORTHERN PLASTICS CORP., La Crosse, Wisc., manufacturer of plastic laminates for the electrical and electronics industries, announced plans for a new plant to manufacture structural decorative panels of laminated plastic for the building and furniture industries. *James S. Gelatt*, president, reported that the laminates will be structurally rigid so that they do not require a backing of other material. The product line will be marketed under the firm's Norplex trademark.

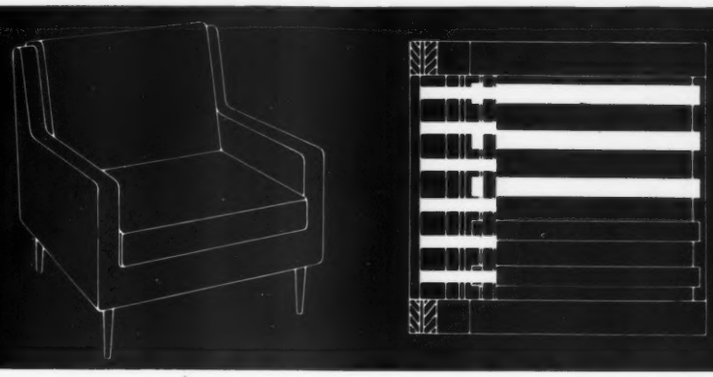
TO PAGE 37

A REVOLUTIONARY SPRINGING FOR FULLY UPHOLSTERED FURNITURE

PIRELLI

RESILIENT WEBBING

Now being used by leading manufacturers all over the world, Pirelli Resilient Webbing cuts labour costs, is easy to use, and gives excellent and lasting comfort to any furniture. There is no better foundation for all types of foams. See how it is used on a fully upholstered suite. For further details, catalogues and drawings apply to your local distributors.



THE MUSCLES OF MODERN FURNITURE

UNITED STATES DISTRIBUTORS Cincinnati 23, Ohio—J. R. Greeno Co., 1217 Ellis Street. Dallas, Texas—Van Waters & Rogers, Inc., 10216 Denton Road. Grand Rapids 7, Michigan—Stephenson & Lawyer, Inc., 433 Crofton Street, S.E. Hazelton, Pennsylvania—The Schwab Rubber Co., Inc., Valmont Industrial Park. High Point, North Carolina—Arthur A. Oliver & Son, Inc., 2410 English Street. Los Angeles 11, California—Van Waters & Rogers, Inc., 620 East Slauson Ave. Marion, Indiana—Crofton Inc., Park at Jeffras. New York 31, N.Y. —The Schwab Rubber Co. Inc., Riverside Drive & 134th Street. Providence 3, Rhode Island—M. H. Stallman Co., 292, Charles Street. San Francisco 19, California—Van Waters & Rogers, Inc., 1001 Brannan Street. Seattle 4, Washington—Van Waters & Rogers, Inc., 4000 First Avenue South. Memphis 6, Tennessee—Southern Foam Sales, 61 West Colorado. Chicago 9, Illinois—Clark Foam Products Co., Inc., 4501, S. Western Blvd.

CANADIAN DISTRIBUTORS Montreal, Quebec—The Shippers Supply Company, 640 De Courcelles St. Toronto, Ontario—The Shippers Supply Co., 65-67 Bellwoods Avenue. Winnipeg 10—Geo. N. Jackson Ltd., 267 Maryland St. Vancouver 10—George N. Jackson Ltd., 100 West Broadway.

PIRELLI LTD · 343-345 EUSTON ROAD · LONDON · NW1 · ENGLAND

FOR DATA CIRCLE FDM NO. 1405

Leading manufacturers say,

"There's no substitute for the quality of B.F.Goodrich Ventifoam!"

(genuine rubber latex foam)

You'll know your furniture is the best in its grade when it's made with the one genuine latex foam that consistently puts the needs of the furniture business first.

Each one down the line, manufacturer—retailer—customer, benefits from the difference in a finished cushion of BFG Ventifoam. And here's why . . .

1. Only BFG Ventifoam has compression-resistance equal in *all* directions. It pushes uniformly and resiliently from within the casing to square the boxing and hold welt lines straight.

2. Only BFG Ventifoam needs so little pull-in allowance. You use less for each cushion, which saves you money.

3. Only BFG has the new crowned Ventifoam which creates a marked plump effect. There are no seam lines to mar the finished cushion because BFG Crowned Ventifoam is single molded—not cemented together.

4. Only BFG Ventifoam has 676 tiny air vents per square foot on *each* side for air-conditioned comfort coolness.

Long years of hard use have proven to millions how much better cushions of BFG Ventifoam are. So put Ventifoam to work for you! Use its demonstrable sales advantages to build a quality reputation for *your* furniture. For complete information write The B.F.Goodrich Company, 10 Derby Place, Shelton, Connecticut.

B.F.Goodrich **Texfoam cushioning**

A member of the LATEX FOAM RUBBER COUNCIL

FOR DATA CIRCLE FDM NO. 138¢

Rebel with a Magic

FDM Designer of the Month John Van Koert finds inspiration in everything—from French

Curves are in and straight lines are out. Movement is important. A domestic, "intimate" feeling is essential. We are entering a kind of "little baroque" period.

These are the opinions of John Van Koert, the *enfant terrible* of the furniture design field. In a few tumultuous years he has entered the wood furnishings industry as a relatively unknown designer, ravaged several conservative houses who succumbed profitably to his new ideas, launched three major and radically different collections for that many firms, and soared to the pinnacle of national success.

He is currently riding the wave of "Vintage," a 27-piece pecan European Provincial collection brought out by Kent-Coffey during 1960 Spring Market-In-The-South.

Close behind, with plenty of buoyancy and forward-propelling, is the impact of "Wintergarden," a coordinated collection of New England ash "with a Victorian nostalgia." It was introduced by Heywood-Wakefield at the 1959 fall southern furniture market.

Surrounding him still too is the appeal of "Profile," which he did for Drexel several years ago and which emphasized "The New Look"—streamlined and tilted—of that time.

What next, *enfant terrible?*

The answer is not easily determined. The vitality and depth of Van Koert—as artist-designer and as a human interested in his fellow creatures—could go in any style direction, with the slightest provocation.

One fact seems certain. He is one of the pace-setters in American—and international — furniture design. He both gives to and draws from a world of many nations. Whatever he does is likely to be fresh and a show-stopper.

Grey-eyed, tall and well-built, this man who was a teacher before he became a designer has a ready smile and a disarming *bonhomie*. He convinces the listener that the Van Koert way is the sound way—predicated on universal wisdom and a personal relationship—and that it will be mutually beneficial. Events of recent years in the furniture trade have proved him right in that area. The name "Van Koert" is beginning to have a magic touch, in dollars across the counter and in the homemaker's imagery.

"I'm an amateur sociologist who has made a study of middle class America," the designer says. "I analyze its motives and aspirations. I've been able to anticipate—by a hair—the shifts and needs of the great middle class market of householders.

"I don't believe in designing esoteric pieces just to prove I'm a good designer. I want everyone to understand my furniture.

"A designer must be sensitive and recognize today—about today—what historians will point up years from now. For example, in 1965 folks will look back on 1960 and talk about things not generally apparent now. In other words, the designer must plumb the social structure."

TO PAGE 24

The Vintage collection designed by John Van Koert for Kent-Coffey Manufacturing Co. is featured as the FDM cover story this month and additional pieces by him can be seen on pages 20 and 21.

SPINDLE-HOOP chair was produced in avocado green, bisque, licorice and red.

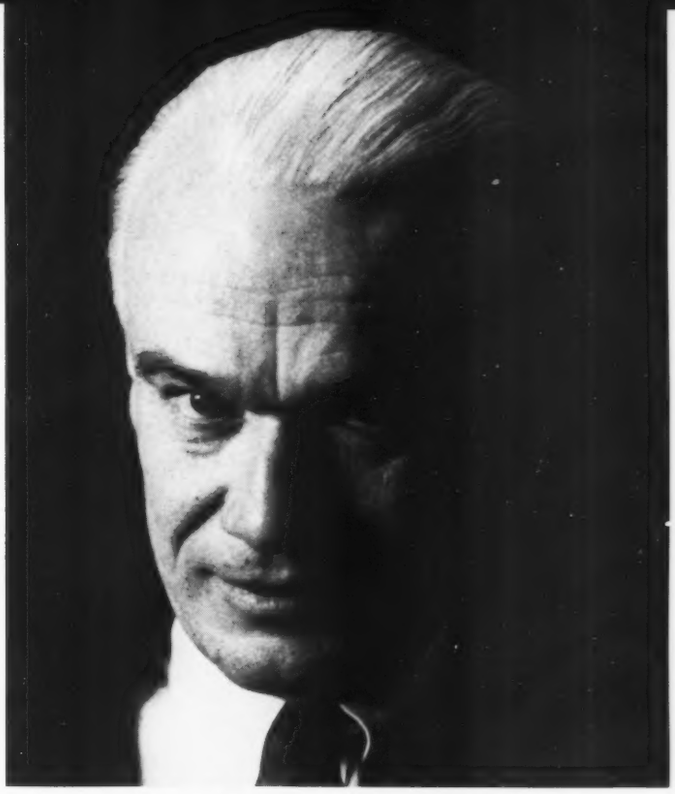
LOW BACK side chair is from Heywood-Wakefield's Wintergarden collection.

HIGH BACK side chair was inspired by the Broadway musical *My Fair Lady*.

Touch

chateaux to American musical comedy.

By Carolyn Knuemann



CREATIVE DESIGNER John Van Koert, top right, has demonstrated his skill in widely separated fields ranging from silverware and exclusive jewelry to furniture styling.

WHITE PLASTIC writing surface is designed as an inset on this drop-leaf, two-drawer desk in walnut and pecan, middle right, created for Drexel's Profile collection.

ALCOVE BED is featured, lower right, in Kent-Coffey's Vintage collection. The headboard, of pecan veneers in a warm cognac tone, is derived from an old French screen.

FRESHLY FANCIFUL, like many of Van Koert's designs, this outdoor set for Troy Sunshade, below, uses curved lines, whimsical fringe on chairs and awning table top.

Foam Rubber Cutting made easy!

WITH LESTO GEQ 2

This Swiss-made precision saw cuts foam rubber, plastic foam, rubberized horsehair and similar materials easily with two blades that reciprocate in opposite directions. They are driven by a powerful universal electric motor that operates on AC or DC. Blades are available for materials of 5¼", 8" and 11¾" thicknesses. Its light weight (3¾ lbs.) and precision balance make it an ideal one-hand tool.

For further information and literature, see your dealer or write:

VICTOR J. KRIEG, INC.
Precision-made power tools of unsurpassed performance
611 BROADWAY, NEW YORK 12, N. Y.

FOR DATA CIRCLE FDM NO. 1393

FABRICS & FIBERS

E. O. FRICKER

Back Coating Upholstery Fabrics

Upholstery fabrics have been back coated with rubber latex or other elastomeric materials for over 30 years. This manufacturing technique has been so successful that the majority of upholstery fabrics are back coated today.

Three decades ago the majority of the better upholstery fabrics were made with wool or mohair face or pile yarns with cotton backing yarns. This was particularly true of pile upholstery fabrics.

There are two types of basic weaves for pile fabrics, namely, the W weave and the V weave. These are illustrated below.

W Weave *V Weave*

Consumers are interested in the face effect of a fabric and care little about the back of a fabric except to expect that it is reasonably strong and that the fabric has the required hand or drape.

In the W weave it is obvious that for three filling picks we have two effective face pile tufts and that the expensive yarn which floats over the center pick has little influence on the face effect and is therefore more or less wasted.

In the V weave it is obvious that for three filling picks we have six effective face pile tufts and there is little or no wasted pile yarn in the backing threads.

From this brief explanation it is easily seen that to achieve the same face effect with a W weave that can be achieved with a V weave you would have to use considerably more pile yarn and use considerably more picks. This would obviously cause the price of the good W weave fabric to be considerably higher than the same face effect V weave fabric.

If a V weave fabric were made as indicated above the pile or pile loop would fall out of the cloth or sink into the backing as there is no binding to keep the pile in place. This pile may be bound in place by the use of a stuffer warp as is indicated below.

Stuffer Warp

The stuffer warp is in addition to the normal backing warp and is designed so that the threads hold the base of the pile in place. A stuffer warp is very expensive.

The next approach was to weave the V weave and then coat the back of the cloth with rubber or a rubber like material in order to bind the backing threads and pile together. This was successfully accomplished and the expensive stuffer warp was completely eliminated.

Prior to World War II upholstery was coated almost exclusively with natural latex as it was collected from the rubber tree. In order to improve the latex certain chemicals such as sulphur, zinc oxide, accelerators, and antioxidents were added. These chemicals cause the latex to vulcanize when the fabric is dried. They also prevent the latex coating from deteriorating through age.

Since World War II synthetic rubber latex has been used almost exclusively. By the addition of many chemicals to the synthetic latex the rubber chemist may control the hand, drape, bulk, elasticity, ageing, and vulcanizing characteristics of the film.

Today the textile chemist has available a number of water dispersions of synthetic elastomeric materials which may be used to back coat upholstery. These include butadiene–

TO PAGE 65

FOR MORE INFORMATION

ON

EDITORIAL—IT'S NEW—ADVERTISED PRODUCTS,

Circle the numbers of the appropriate item or advertisement, tear out and mail this postage free card.

FDM—Reader Service Dept.

is at your service. Write us if you would like more information about any source of supply.

Please send me further information about the items circled below:

EDITORIAL ITEMS: O-150 O-151 O-152 O-153 O-154

IT'S NEW: (Materials, Supplies, Equipment, Components, New Literature)

553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568
569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584
585 586 587 588 589 590

FDM Numbers: (Advertisements)

1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375
1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388
1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401
1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414
1415 1416 1417 1418 1419 1420 1421 1422 1423 1424

NAME_____ TITLE_____

(Please Print or Type)

COMPANY_____

ADDRESS_____

CITY & STATE_____

ZONE NO.

OCTOBER 1960 • This card good until December 1, 1960

Postage Will Be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 17269, CHICAGO, ILLINOIS

FURNITURE DESIGN and MANUFACTURING
608 S. DEARBORN ST.
CHICAGO 5, ILLINOIS

FOR MORE INFORMATION

ON

EDITORIAL—IT'S NEW—
ADVERTISED PRODUCTS,

Circle the numbers of the appropriate item or advertisement, tear out and mail this postage free card.

FDM—Reader Service Dept.

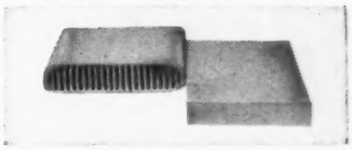
is at your service. Write us if you would like more information about any source of supply.

MAKE THE MOST OF IT WITH THE WORLD'S MOST SATISFACTORY CUSHIONING

U.S. KOYLON® *Latex* FOAM RUBBER

GENUINE LATEX FOAM RUBBER FOR THE FINEST IN CUSHIONING

When you give your customers top quality there are no complaints—and no returns. That's why, when it comes to cushioning, it pays to use the best. And the best—by proven performance—is U. S. Koylon genuine latex foam rubber cushioning, outstanding for complete customer satisfaction for over a generation. Nationally advertised Koylon Foam is known and asked for by name—it's a profitable "plus" factor in furniture selling!



FOR FASTEST SERVICE all types of Koylon latex foam—luxurious molded cushions, flat stock and *economical* new Pin Core Foam (flat or crowned) can be shipped to you from the Midwest—Mishawaka, Indiana; the Far West—Santa Ana, Calif. And to make your quality coverage complete, count on the winning combination of Koylon Foam with chemically compatible U.S. Naugahyde® and U.S. Naugaweave® upholstery.

United States Rubber

Coated Fabrics and Koylon Seating Dept., Mishawaka, Ind. In Canada: Dominion Rubber Company, Ltd.

FOR DATA CIRCLE FDM NO. 1416

DESIGN PROGRAM BROADENS FOR KENT-COFFEY

HOW A CONSERVATIVE, OLD-LINE COMPANY ENTERS NAME-DESIGNER FIELD

When a conservative furniture manufacturer, which has concentrated on volume production of promotional medium-priced furniture, decides to embark on a new program centering around a name designer, there's usually a good reason behind the transition.

What was the reason for Kent-Coffey's decision to emphasize distinctive, high style merchandise, with special appeal to a discriminating clientele? Why did it engage renowned designer John Van Koert to head this new creative program.

For half a century Kent-Coffey successfully manufactured and marketed a good, but not remarkable, product. A year ago the firm decided to add a supplementary, or complementary, phase to its existing line of medium-priced bedroom suites. The company did not want to cease production or sales of its successful and proven line, but it did want to broaden its scope and work on several levels simultaneously. It wanted to appeal to the discerning housewife as well as to the mass consumer market. The only way to achieve this was to offer merchandise of suitable appeal to each.

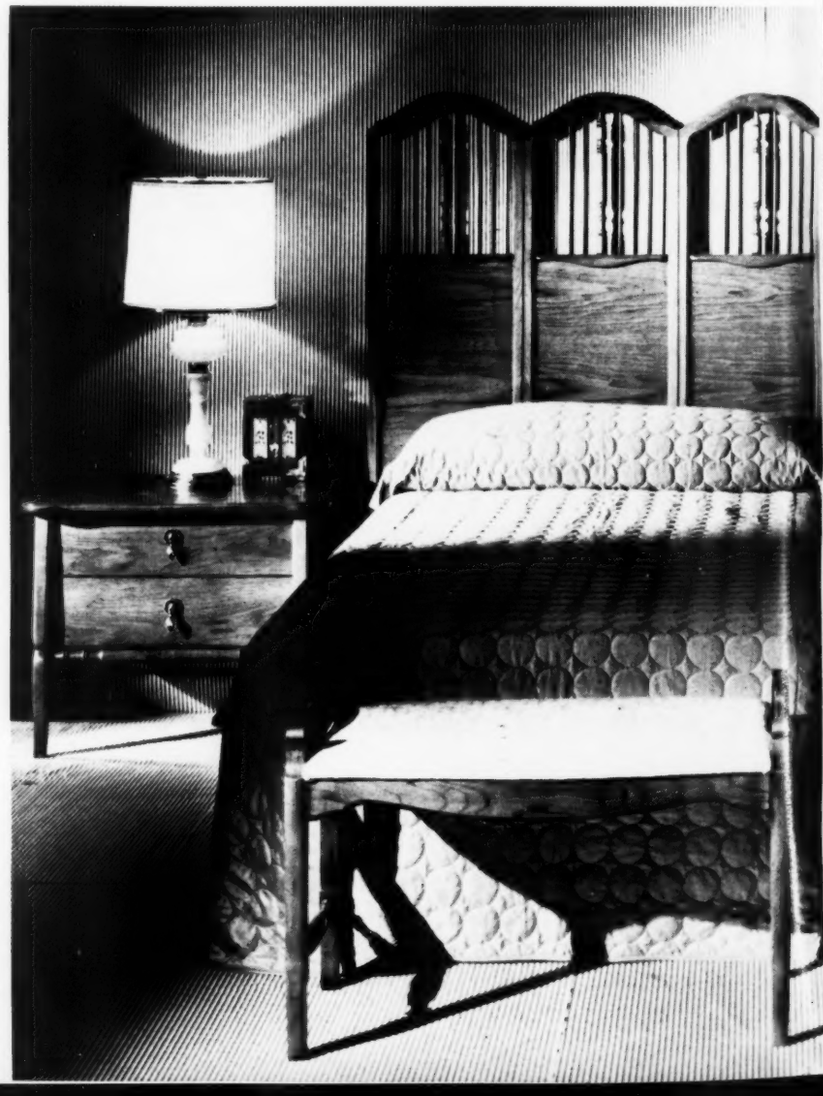
During the spring Market-In-The-South, Kent-Coffey launched the new program with the introduction of its European Provincial line which they named "Vintage". Why did they decide on Provincial furniture? "There is a special demand by the public for Provincials", said President Harold Coffey. "A diversified line means wider scope for dealers". He also reported, "We plan to con-

HAROLD F. COFFEY
President

W. CLYDE SUDDRETH
Secretary-Treasurer

WILLIAM H. MAYNARD
Vice President, Sales

HARRY E. BEATTY, JR.
Plant Superintendent



MARKETS

BY CAROLYN KNUEMANN

tinue expanding the line with other Provincials".

Additional explanations for broadening the line were offered by other Kent-Coffey officials. Some of the thinking focused on the value of establishing a "company image", a genuine identification in the eyes of the buying public; the continuity of good design, which has validity over many years; affirmative response from dealers who cited too many markets and too few selective designs; and prestige, in the eyes of both the retailer and the consumer.

To achieve these objectives, Kent-Coffey engaged John Van Koert. Together they devoted themselves to "Vintage". Its theme is easy grace in pecan wood, with an aim to bringing originality to the already popular Provincial

TO PAGE 22

"OMNIBUS" CHEST, a star of "Vintage", is five feet high, 42 inches wide. Door panels, with ornamental touches of flourishes and turnings, swing on piano hinges to show vari-sized drawers.

CANOPY UNIT with pier cabinets is from Kent-Coffey's 6910 Group in walnut and elm. It may be used with any bed in the collection.

KING SIZE HEADBOARD, from Ken-Coffey's "Vintage" collection was inspired by panels of a French screen. Flowing contour, which lightens the scale and gives grace without bulk, is also used on night stands and benches. Designed by John Van Koert.

KENT-COFFEY PRODUCTION ADAPTS

style. They have used light, fluid lines instead of the awkward bulk from which many Provincial collections suffer. Curves appear on end panels. Single, long turnings accent fronts. Several mirrors and beds have turnings as horizontal members.

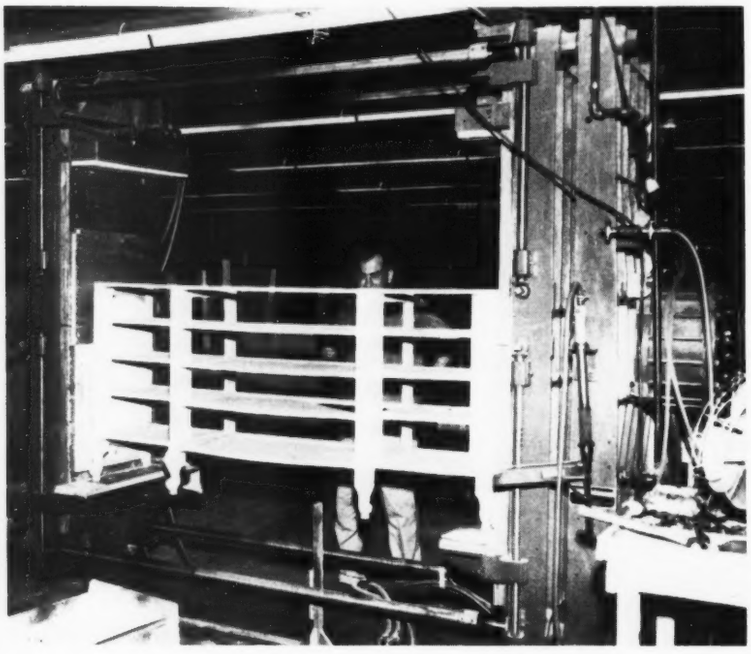
The line features a varied and rich pecan grain. A clear, mellow finish is used—defined for consumer promotional purposes as ". . . the tones of a fine old cognac, and suggesting the antique bottle used as the symbol for the 'Vintage' collection". Accent colors for accessory items are celadon green and rusty black.

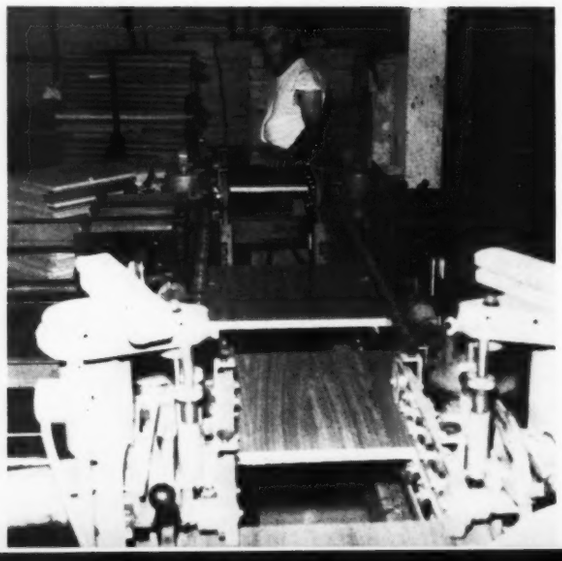
The collection includes several distinctive and unusual pieces. A 45-in. high pier deck may be hung on the wall or set on a chest or nightstand. A slim hanging mirror with console shelf is suitable for hall, bathroom or dressing room. A head board derived from the panels of an old French screen has created considerable interest. For maximum glamour, two of the headboards, one narrow and one wide, can be set at right angles. By adding bed draperies, the arrangement achieves the decorative look of an alcove bed. The "Vintage" chest, dubbed the "Omnibus" is five feet high. Its two-drawer base is surmounted by tall paneled doors trimmed with turnings, which open to reveal more drawers.

Upon completion of the collection, Kent-Coffey began a program to promote and publicize its fresh offerings and broadened line. They aptly named the line "The New Look" and sent word forth via news releases to daily papers, shelter magazines and the trade press. Van Koert further emphasized the new look by a re-decorated showroom which served as a dramatic background for "Vintage". Many sections of the showroom were lit by hanging and pedestal lamps, proportioned to set off the furniture and to accent its colors and finishes.

Van Koert, who believes that a designer has merchandising as well as creative responsibilities in the success of a collection, made himself available for newspaper, radio and television interviews to tell the story of "Vintage" and the "New Look at Kent-Coffey".

One of the prime reasons that these new innovations were possible is Kent-Coffey's Plant No. 2, with facilities for almost custom-type furniture. The firm's Plant No. 1





This page–

"VINTAGE" DRESSER, left above, is assembled on case clamp, supplied by J. M. Lancaster, Inc.

EDGE-BANDING MACHINE, left below, is from I. M. A. Maschenenfabrik, Klessman, K. G., Germany. Equipment is distributed by Wilco Machine Works, Inc.

Opposite page–

GRAIN PRINTING EDGES, top picture – left, is performed on a machine supplied by Schmutz Mfg. Co. Finishing materials are supplied by Reliance Varnish Co.

PACKING MACHINE, top picture – right, automatically staples bottom of each carton to skid. Equipment leased from Hinde & Dauch box division of West Virginia Pulp & Paper Co.

AUTOMATIC RUBBING MACHINE, bottom picture – left, handles complete case pieces on conveyor. Equipment supplied by Curtis Machine Division of The Carborundum Co.

CURVED, LAMINATED DRAWER FRONTS, bottom picture – right, are produced on a Columbia press made by Lodge & Shipley. 20 KW electronic heating unit is by Industron Corp.

S TO NEW DESIGN CONCEPT

is highly conveyorized. Executive Wayne Miller said of this plant, "We build furniture like GM builds autos."

Plant No. 2 was the answer to the problem of customized production. It has special facilities for individual or large case pieces. Planned to be non-conveyorized, it specializes in manufacturing large pieces, beds and occasional items which cannot ride conveyor belts. It is here that the very high Omnibus chest and the 77½ in. dresser are made.

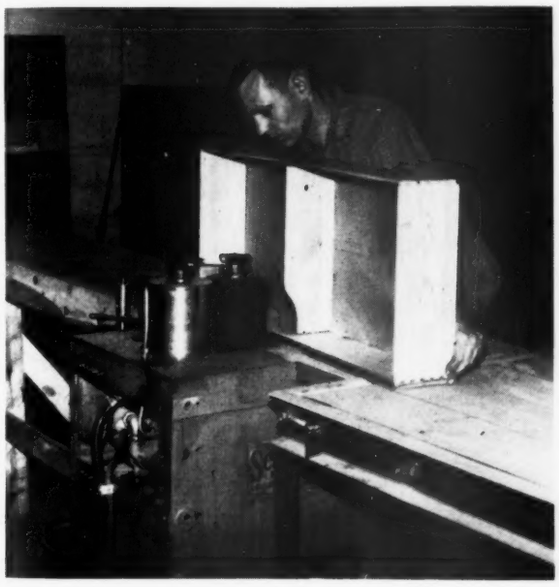
It is in this specialized plant that Kent-Coffey's unique end construction operation is carried out. The end of the case piece consists of four component parts: front and rear posts, end stretcher, and end panel. When assembled they serve as the case end and case base. Prior to final assembly, each part is extensively machined.

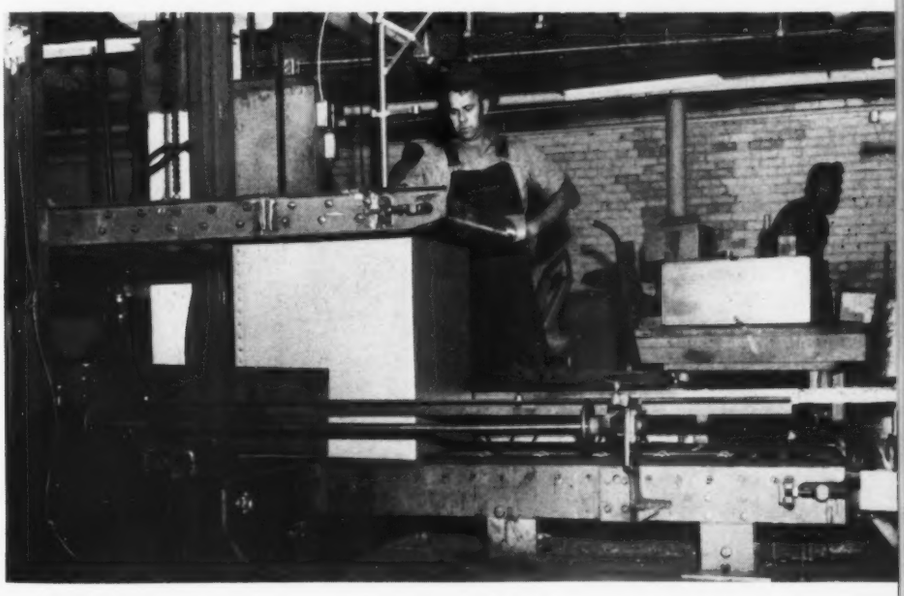
Front and rear posts undergo identical machining. After leaving the rough planer the stock is sent to the cut-off saw for end trimming to exact length dimension and to the rip saw for side trimming to exact width dimension. The posts are then formed on the moulder and go on to a band saw which cuts out the notches in the posts and which actually creates the rough form itself. Additional shape is given the posts through a shaper. Next, they go to the router which runs a rout line, and on to a machine which bores holes for dowels, and which, when inserted, will attach the posts to the end stretcher and end panel. The posts are then sanded twice.

The end stretcher receives similar treatment, but only goes to the cut-off saw, rip saw, moulder, miter saw, and band saw, receiving appropriate operations. The end panel is laid up from five ply material consisting of core stock, cross banding and face veneer, similar to any veneer operation. When completed, the operation produces an end panel 13/16 in. thick. After the panel is laid up, it is cut to size to conform with the posts and end stretcher assembly and is fastened to end stretcher assembly by dowels and glue.

After the four component parts are assembled they go back to the shaper for a smoothing up operation so that all joints conform and give the appearance of flowing together. The final step of the end assembly is achieved through five different sanding operations.

TO PAGE 36





REBEL WITH TOUCH
FROM PAGE 16

Says Van Koert: "One wonderful exercise in social history is to look at old television films, to get the dominant flavor of a period. For instance, a trained art historian can tell the difference between a 1924 movie and a 1928 movie just by the setting and action."

He adds: "The designer must also recognize the absurdities of a present period—and steer clear of them in his offerings.

"But I refuse to moralize in my designs."

About style trends, he thinks:

"We've passed out of straight-line modern, which most folks have come to consider 'cold intellectualism' and which has moved into the specialization of public buildings. Yet we shall return to it later, modified."

Fluidity, warmth and homey qualities are wanted today, in his opinion.

"In furniture design, we are not in a period of big ideas. Actually, there were more ideas ten years ago. Rather, the emphasis now is on refinement, on improved color taste, on quality and natural materials. Upholstered manufacturers pay more attention to good sewing. Values in finishing are on real woods, with more transparent finishes such as the Scandinavians use. Natural materials —woods, marbles, stone, lines in fabrics, lots of leather—are undergoing a renascence."

Van Koert's interpretation of this refinement and naturalness is a swinging of the fashion pendulum from the recent mass-produced look, a reaction from "boredom of the consumer with market uniformity."

Discussing the differences between consumer-motivation in the U.S. and in Europe, he explains: "Most Europeans have furniture in their homes that is either very old, or very pure and general so that you can't tell whether the pieces were made in Stockholm or in Amsterdam. But Americans tend to romanticize, to sentimentalize, to want change.

"Americans buy things not because of esthetic taste but because of association. During the present period when many Americans are newly prosperous, there is a drive for the appearance of gentility in home furnishings."

Van Koert often studies the theatre, as a yardstick of what America likes. "Wintergarden" was the result of *My Fair Lady;* and although some writers have called the collection "The Marilyn Monroe of Furniture," Van Koert says that Eliza Doolittle is its godmother. In his opinion, Eliza influenced both the furniture fashion and garment fashion industries.

In the same vein, he feels that *South Pacific* helped popularize tropical plantings in American homes, and the splashy prints covering girls and chairs.

Consumer products and mores have a general inter-relationship, he states. His "Profile" and Chrysler's "Forward Look" were first cousins, he feels.

"I try to build into furniture some ideas that communicate," he says. "I consider it the responsibility of the designer to see the furniture almost into the home—to 'build the sell into it,' so that it almost sells itself."

"Vintage" is one answer to today's demands, in his estimation. "It is highly domestic, gentle, and will age gracefully. Much Provincial furniture on the market is too heavy, too clunky, too tortured by many grooves

Sol Diamond

President, Diamond Brothers
Plants at Reading, Pa.,
Coal City, Ill. & Swaynesboro, Ga.

"Factoring is a science with Textile Banking Company. Our past experience of handling our own receivables with and without assignment through a bank has taught us that credit and collections is a specialty in itself and should be handled by experts. Textile Banking has the "broad view" since they have other clients in our field and are in a better position to judge a situation more intelligently. We have found Textile Banking Company to be most cooperative."

* * *

TBC credit and financial services are available in many fields of industry. They are most effective for manufacturers with annual sales of $500,000 and over. One of our officers will give prompt attention to any inquiry, either by letter or in person.

TEXTILE BANKING COMPANY
55 Madison Ave., Dept. FD, New York 10, N.Y.

BTC

SUBSIDIARIES:
T. B. C. Associates, Inc., New York
Southwest Texbanc, Inc., St. Louis
Pacific Texbanc, Inc., Los Angeles

FOR DATA CIRCLE FDM NO. 1412

and much edging." Although "Vintage" has a French chateau flavor, he intends it to mix well with early American and other periods.

He likes to work with color. "Vintage" uses celadon green and rusty black, along with a basic pecan finish called cognac. "Wintergarden" has two regular finishes of bisque and licorice, plus two accent colors of poinsettia red and avocado green.

He enjoys inventing unusual pieces. The most recent collection offers a bed headboard based on an old French folding screen, an Omnibus chest, a deck suitable for dresser or nightstand, and a striking pier mirror with console shelf. The earlier collection includes a saucy hour-glass table, a davenport with ski-slope arm, and ottoman sporting a table shelf.

After two years at the University of Wisconsin in Madison, Wisc., he transferred to Milwaukee State Teachers College at Milwaukee, where he received an A.B. degree. Next he took a Masters in Art Education from Columbia University in New York city. From 1936 to 1942 he was on the faculty at the University of Wisconsin, teaching Design, Advertising Design, Metalworking, Drawing and Painting.

He began designing for Harry Winston, the great jewel merchant in New York, and from 1946 to 1948 planned gems for maharajahs and tiaras for queens. For the next five years he designed for Towle Silversmiths at Newburyport, Mass.; his "Contour" is still considered a classic modern pattern all over the world.

In 1952 and 1953 he was engaged by the four Scandinavian countries to help put together and promote in the U.S. a show, "Design In Scandinavia." The show opened in Richmond, Va., toured about 20 museums in this land and in Canada, and brought to the American furniture industry an increasing awareness of Scandinavian design.

By the time he entered the furniture design field, Van Koert in his own words "had a chance to develop with detachment, without specialization, after designing in non-competitive areas." He is proud of the fact that he was "a mature person artistically" when he launched his present activities.

Along with contributing to Heywood-Wakefield, Kent Coffey and Drexel, Van Koert has done outstanding work for Carolina Mirror and Troy Sunshade.—*Carolyn Knuemann.*

HOME OF MIDFOAM®

Here are the advantages you can expect when you specify MIDWEST FOAM—

- **ALL TYPES OF Polyether or Polyester FOAMS**
- **Quality with economy**
- **Customized service**
- **Controlled cellular structure**
- **Uniform porosity and compression**
- **COMPLETE DESIGN SERVICE AVAILABLE**

Midwest Foam is custom engineered to the specifications you must have. No individual requirement is too tough for Midwest to handle whatever your special need—in density, resiliency, molecular structure, shape or size, you can be sure Midwest will fill the order promptly with prime quality polyurethane foam. We invite you to challenge our research chemists.

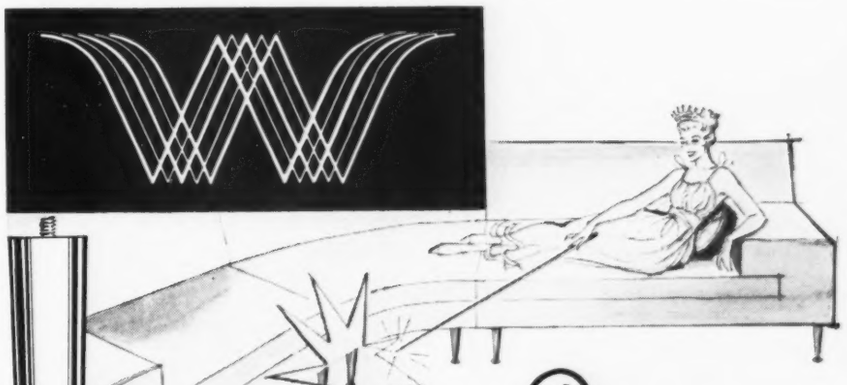
NO ORDER TOO SMALL OR TOO LARGE

Representatives—we still have some choice territories available. If you would like to represent the finest plastic foam producer in the United States, contact us immediately.

MIDWEST FOAM PRODUCTS COMPANY

1632 Chicago Avenue, Evanston, Illinois • DAvis 8-6905 • Factory: North Chicago, Illinois

FOR DATA CIRCLE FDM NO. 1399



THE GRACE OF *Diana*...

THE STRENGTH OF APOLLO

Every leg, every ferrule of the extensive Wilkenson line is a masterpiece of graceful lines . . . strength . . . and enduring beauty. Wilkenson Square and Tapered Legs are slim, seamless, strong . . . available in lengths from 3" to 28" . . . in satin brass, coppertone, chrome and pewter.

Exclusive self-leveling glide (optional) permits up to 1" height adjustment.

Should you have specific requirements, we will make what you need from your own blueprints.

FREE! For your convenience and easy reference, you may have a beautiful, 2-color wall chart of all our Legs, Brackets, Ferrules and Glides. Drop us a card today.

WILKENSON Manufacturing Co.

2916 WEST LAKE ST. CHICAGO 12, NEvada 2-2645

FOR DATA CIRCLE FDM NO. 1420

Complex Art of Contour

By Carolyn Knuemann

The space age has given birth to a new generation of furniture designs, which 25 years ago would have seemed more science-fiction than fast-moving, highly marketable products.

Made from synthetics that have existed only a few years, production of this new family of furniture differs from traditional furniture manufacturing as much as plastics and alloys differ from conventional materials.

One company that met this challenge, both on the design and production fronts, is Thaden Molding Corp., of High Point, N. C. "Ours is a seriously designed product," declared Dr. Bernard Gutterman, who taught engineering at Pennsylvania State University before becoming vice-president and a prime innovator at Thaden.

"We have a space age approach to functional design. We go about producing a contour chair mold in the same way a topographical map is created. Science and precision are both needed for maximum effectiveness."

Thaden developed its own patented system of molding three-dimensional compound curves with hand lay-up methods for manufacturing fully upholstered contour chairs.

"You can throw our chairs from high flying airplanes and they won't break," said Dr. Gutterman. "The relation of strength and shape is not forgotten though. It is important in planning a chair—molded modern or Chippendale—to support the human body correctly.

"Curvature is carefully determined. The point of maximum curvature, for example, plus the forward part of the seat and the inner arm length may vary with the style of the chair—but the human anatomy is the deciding factor in the design. The anatomy must be kept happy."

Currently the company is making 13 different shell models—ten for itself, plus three supplied for other manufacturers and a national retail chain. Norman Hekler of High Point is mold designer for Thaden.

Four ovens have been specially constructed by Thaden—each holding one triple-cavity vacuum mold, which means at any given moment 12 chairs can be processed in the ovens.

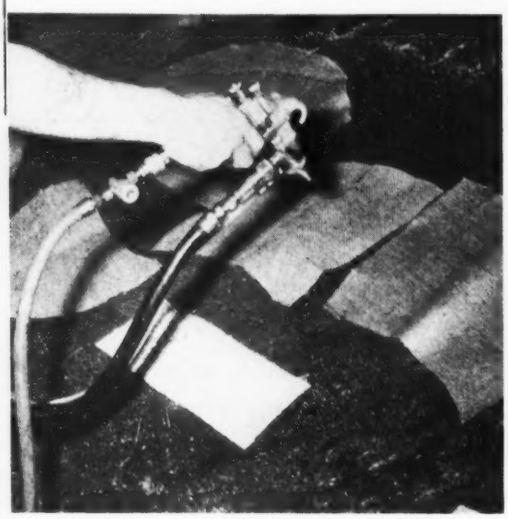
During the preliminary manufacturing process, the raw materials are cut into shapes conforming to the chair contours. Reinforcing materials are then added at high stress areas and strategic points, consisting of fiber glass cloth, fibre glass mat, and burlap sections which have been heat cured to remove all moisture.

Next, the cured components are moved to a spray section where carefully formulated polyester resin, accelerator and catalyst are applied to each piece. The application of the polyester formulation is controlled and regulated so that initial and final mixing are done at the tip of a Binks spray gun designed by Plastics Engineering of Ft. Lauderdale, Fla., for this purpose. Nylon tubing carrying pre-promoted resin leads into one section of the spray unit, while another nylon tube carries catalyst and solvent injected at the spray tip.

Both mixtures are properly blended at the point of application, and are operated simultaneously by a single control lever.

The impregnated fabrics are then put into a female mold—layer by layer, with interplaced overlaps. When the required thickness is attained, a rubber sheet—pre-molded to the shape of the chair—is laid over the entire mold.

After the rubber form has been placed and secured, all air is withdrawn, causing the form-fitted cover to exert one atmosphere of pressure—equal to 14.7 pounds per square inch—at the laminate surface. In addition



POLYESTER RESIN, accelerator and catalyst are applied to fabric by spray gun.

IMPREGNATED FABRICS are placed in female mold and covered by vacuum sheet.

COOLED SHELLS are removed at the end of the heating cycle and cooling period.

r Molding

to forcing the layers of fabric together, the vacuum pumps remove trapped air from between the impregnated cloth.

There are two benefits from the air removal—fewer air pockets are formed and the strength of the chair is increased. It also enables the polyester resin to cure more effectively in an oxygen-free environment.

The molds containing the impregnated laminate under full vacuum, are placed in pre-cure ovens for approximately 30 minutes. Here the initial hardening reaction is accelerated by a constant 225° F. temperature. The mixture is plastic, catalyst and promoter will harden within 20 minutes at the steady temperature, after being placed on the fabric.

If the mold is not put under vacuum in the oven within 20 minutes, the individual layers begin to harden without benefit of pressure and true laminate adhesion. The end result would be a structurally weak chair. For that reason, catalyst is added only at the point of application in the Thaden method.

At the end of a 40-minute curing heat cycle, the cool shells are removed from the molds. Excess plastic is ground off, and the shell is placed in a post-curing heater for 36 hours. Tensile strength is obtained by the heat cure, but maximum strength is approached in the post-cure.

"Actually, the combination continues to gain further strength with time," stated Dr. Gutterman. "The peak is achieved while in use by the consumer." Along with strength, the completed shells have excellent resistance to moisture. They also are unaffected by cold or heat.

From the post-cure section, the raw shells are backed with black Hessian cloth or colored fabrics using polyvinyl acetate. Final stages are the assembly section, or packing for distribution to other manufacturers.

At the assembly area, the various base styles are attached to the shells using six different mounting methods. The most common is to drill holes in

TO PAGE 28

ARMLESS CHAIR, right, is one of 13 different designs made by Thaden with its patented compound curve molding system.

CAREFULLY CONSIDERED curvature on this swivel executive chair is a Thaden hallmark illustrating design plus strength.

SWIVEL ARMCHAIR is designed to support the body correctly through its well researched contours developed by Thaden.

CHAIR-WITH-TABLE combinations in single, double and triple seaters with a line of separate tables is offered by Thaden for lounge seating.

CONTOUR MOLDING
FROM PAGE 27

shell bottom, place a T-nut in fitted hole on the inside of shell, and screw into it from the bottom.

Other methods include self-tapping sheet metal screws, wood screws, and ordinary stove bolts. "The flexible nature of the product allows many other base applications," a company official said.

In upholstering, the partially assembled shells are rimmed with high-grade cotton, covered with foam and then are ready for covering upholstering. The front cover is a selected textile fabric or plastic.

A patented friction lock principle holds covers and foam in place without tacks, nails or glue. Elimination of these conventional devices makes the upholstering job at Thaden a simple, rapid process. Technique rather than skill is required. An average unskilled worker can master this new style of upholstering in a few hours and after a week or two, he can become highly proficient.

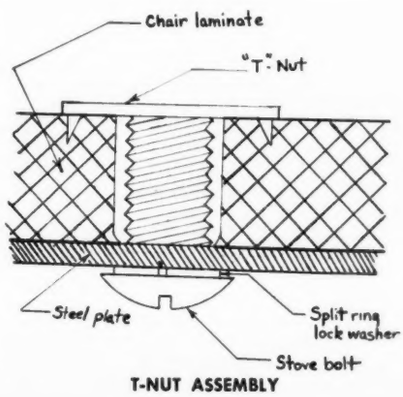
Because of the nailless friction-lock principle, the Thaden chair has another unusual feature: front covers are readily removable without tools or skill. This is accomplished by "untucking" the cover from under the outer edge rim clamp of the chair body, and unzipping the entire cover from the body seat. Covers are tailored either in a one-piece construction for from a number of pieces—such as back, arms, and seat—sewn together as a unit with the attaching zipper segment along the seat line. Therefore, the cover unit can be removed for cleaning, or for decor change with an alternate cover.

"Although the idea of re-upholstering—not slip-covering—a molded chair is unusual, Thaden experience has shown that a typical homemaker can change covers in as little time as ten minutes—and get a professional appearance on her first try," reported the company.

A choice of models is offered. An ultra modern style has a base comprised of a tubular metal column stabilized with four spider beams, each with a soft plastic ball foot. Rotably mounted at the top of the column is an inverted pintle to which the chair body is fastened by four angle outriggers.

All metal parts are arc-welded into a substantial structure. The body with attached pintle, swivels in the pedestal and is separable from it for KD shipment or storage. Finish is baked epoxy in black, white, and decorator colors on request.

A contemporary version has a base consisting of narrow steel tubing and rods attractively splayed out from the body. Plastic glides or foot levilizers are incorporated. The base attachment to the chair has the T-nut application. Rods are fabricated to follow the chair contour at the point of at-



T-NUT ASSEMBLY

coil-spring design

with Bassick Flo-Tork

Clean up that swivel-chair silhouette with BASSICK FLO-TORK

Here's the neatest, cleanest-looking, smoothest-acting swivel-chair tilt mechanism on the market today.

It's Bassick Flo-Tork chair control—so simple, so effective you'll wonder why somebody didn't think of it years ago.

Flo-Tork's new torsion-bar principle—proved in famous-make automobiles—gets rid of unsightly, protruding coil springs that mar the silhouette of conventional tilt chair designs. Flo-Tork's compact, light weight torsion bar is practically invisible; only the results let you know it's there.

Your customers will appreciate, too, the complete absence of squeaks. All-nylon bearings take care of that. They'll like the easy-to-turn side-mounted adjustment that lets them adapt for their weight *while sitting normally*—without bending double or up-ending the chair. Most of all, though, they'll go for the smooth, easy ride Flo-Tork gives them, from upright to full reclining without sudden, jarring stops at the end of tilt travel.

Compact, easy-to-install assembly.

Bassick Flo-Tork is available for every size and type of tilting swivel chair. Equip your chairs with Flo-Tork and watch your sales mount. 0.37

THE BASSICK COMPANY
BRIDGEPORT 5, CONN.
IN CANADA:
BELLEVILLE, ONT.

Symbol of SW Excellence
Bassick
A DIVISION OF
STEWART-WARNER CORPORATION

FOR DATA CIRCLE FDM NO. 1367

tachment, giving a better load distribution. These bases come in brass plate, chrome plate, baked brass epoxy, baked black or white epoxy, and decorator colors.

For the traditional market, Thaden makes a base of four turned wooden legs, dowelled and bolted to contoured stretchers. The large bearing surface and shell contact provide a virtually indestructible unit, which is also mechanically attached through the inside bottom of the chair shell itself. Finishes on these bases are walnut, ebony, fruitwood, mahogany, birch, and others.

Thaden believes that its product is adaptable to home, office or institutional purpose, and suitable for the retail dealer or for contracting. By using a different base style, including a caster and tilt arrangement, an occasional chair can be converted into a high-styled and comfortable executive swivel or secretarial chair.

In addition to lounge, office and institutional seating pieces, the firm makes molded bar stools, love seats, chair-with-table combinations in single, double and triple seaters, and a line of separate tables.

When solid woods are needed, Thaden mainly uses ash with walnut finish. Plywood is A-1, 11-ply poplar, supplied by Ingram Plywood of High Point, N. C.

Natural latex, pre-molded by Thaden to a rubber form bag about 1/16-inch thick in the shape of the chair, is from Naugatuck of Gastonia, N. C.

Sagless twill sacking comes from Norfolk, Va. Machine screws are supplied by Ragan Charmichael of High Point, N. C. Fiber glass supplies come through Hess Goldsmith of New York city, and include materials from Burlington Mills, from Ferro Corporation of Nashville, Tenn., and Glascoat of Atlanta, Ga.

Upholstering supplies include polyurethane and polyether from Southeastern Foam Rubber of High Point, plastic for covers from U. S. Rubber, General Tire Co., Athol, and others.

Molds consist of the conventional modeling clay, made into molding plaster, converted into plastic, which in final stage becomes the mold itself. Thixotropic polyester by Celanese, or epoxy, is used.

Minimum manufacturing time for a mold is about a month, while manufacturing time for a chair shell is two to five minutes.

The Thaden operation was formed in 1947—to produce U. S. Navy torpedo parts, aircraft components, and a variety of molded plywood sections. Herbert Von Thaden, a High Point engineer, orginated the company as Thaden Engineering of Roanoke, Va.

In April 1959 the Thaden Co. was bought by Monarch Furniture Co. of High Point, and moved as a separate entity, called Thaden Molding Corp., to the Monarch plant. Today it has converted exclusively to the manufacture of molded polyester products —from medium-priced furniture to unsinkable fiberglass canoes.

Company officers are Mose Samet, president; Dr. Bernard Gutterman, vice-president in charge of research and development engineering, and sales, and H. Gutterman, secretary-treasurer.—*Carolyn Knuemann.*

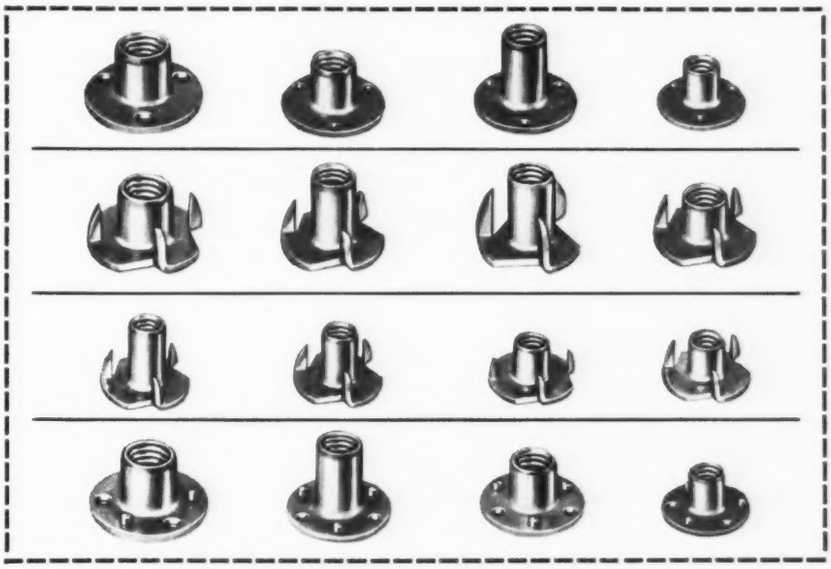
VACUUM MOLD CROSS-SECTION

3 important advantages when you specify CON-TORQ T-NUTS

1. QUALITY — Con-Torq T-Nuts are made to only one standard — the highest.

2. QUANTITY — Con-Torq T-Nuts are available in all needed types and sizes.

3. DELIVERY — All you want, when you want them. Let us send you samples and prices.



Self-locking nuts, too! . . . from Con-Torq

Save you time, labor and money.

- apply with pliers or hex wrench
- lock secured in any position
- cannot work loose
- require no additional locking device such as lock washers or cotter pins.

CON-TORQ INC.

subsidiary, North & Judd Manufacturing Co. New Britain, Conn.

FOR DATA CIRCLE FDM NO. 1376

m.c.* Your Key to Improved Profits

The second of a two-part series.

By Nancy Ladd

Last month FDM introduced the industrial engineer, describing his work in eliminating production problems. This concluding article explains where the management consultant fits into today's furniture manufacturing operation.

The management consultant, like the industrial engineer, can aid manufacturers to streamline their operations, unlock hidden profits, and modernize obsolete production methods.

But first, what's the difference between these two men? Strictly speaking, a management consultant is a person equipped to consider *all* problems of business. He is not limited to only the engineering functions, while the industrial engineer specializes in this area.

Is it better to have an industrial engineer on your staff, or to retain a management consultant with his greater resources?

Wayne Walter, a member of Chicago management consultant firm Booz, Allen & Hamilton, suggests that the following situation is one when a furniture manufacturer may need a management consultant. A company may decide to radically update part of its machine setup (such as the introduction of staple guns). An innovation of this degree will mean drastic changes in the entire work system, changes which must be made swiftly. Normally, a staff of i.e.'s can keep pace with the demands of day to day operations, but they might find themselves incapable of handling major revisions quickly. Here is an ideal time to call an outside consultant.

Generally, the small firm may not feel it is economically feasible to maintain a staff of i.e.'s. This type of company is more and more seeking the services of a m. c. and may call on the same consultant from time to time. Large manufacturers may either retain an m. c. on a regular basis or, as has been suggested, maintain a staff of i.e.'s plus call on an m. c. for supplementary services or to handle problems of unusual complexity.

John A. Patton, executive vice president of George Fry & Associates, a Chicago management consultant firm, offers still another viewpoint. He feels there are certain problems with having i.e.'s on the staff of a furniture company. Since they are on the payroll, for obvious bread-and-butter reasons, they are hampered in criticizing management as much as they would like to or should. "The real value of a good consultant," says Patton, "is when he takes a stand with management that somethings *must* be this way. A good m.c. doesn't compromise or pacify but tells what should be done."

Harold B. Maynard, president of

*m.c.—*Management Consultant*

Methods Engineering Council, Pittsburgh, suggests that there are five key ways by which a manufacturer can use an m.c.:

(1) to have an *objective* study made of a particular problem by a qualified expert;

(2) to get *fresh* thinking applied to a specific problem;

(3) to have a new technique or procedure installed when you don't feel that your own organization is qualified to do it;

(4) to develop the people in your organization through contact with an *outside* viewpoint;

(5) and, to augment your regular staff to handle a temporary overload of work when you don't want to add permanent employees.

But whatever the reason you decide you need the services of an m.c., and whether you're a small or large firm, what it all boils down to is: *how do you find the right m.c. for your purposes, how do you work with him, and what will he cost you?*

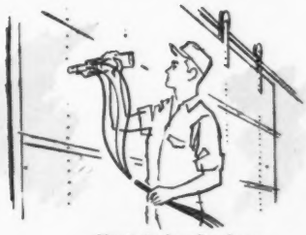
First, of all, *it is important that your attitude is right* before taking steps to find your m.c. Don't use him as a scapegoat; that is, hire him just long enough so that he can be blamed for an undesirable situation which has germinated long before. Another improper use is to have the consultant "swing the axe" or make proposals which management has hesitated to make. Having an m.c. on hand to lend "prestige" to the proposal is evading the issue.

Often a manufacturer thinks that an m.c. is a relatively easy way to shift difficult problems to someone else's shoulders. Such a situation can result in long-run difficulties even though circumstances seem to be improving in the shortrun. Any reputable consulting firm, of course, will resist such assignments whenever it can foresee them, since such an "attitude" can be detrimental to both the m.c. and the company.

The proper role—both from the viewpoint of the company and the m.c.—is an auxiliary one, that of providing analysis, information and advice such as will help management to make better decisions than it otherwise would be able to.

The next step toward getting ready to engage a consultant, should be *to define your problem clearly.* Take a long hard look at why you think you need an m.c. and what you expect

TO PAGE 32


Sheet steel on fire doors

Mobile homes

Applications like these...

Electronic components to brackets

make POWASERT® a metalworking must!

The applications shown here demonstrate just how POWASERT automatic fastening equipment proves itself in demanding metalworking applications.

What you do not see is the fact that POWASERT saves time by eliminating pre-drilling, prepunching in many applications. Does away with tricky positioning problems, too.

Whether you use tacks, nails or screws, "one-hand operation" POWASERT can increase your present speed . . . fasten more accurately . . . hold metal to other materials more securely. Result? You get faster, safer fastening at less cost.

Check the list of applications below to see where POWASERT fits into your metalworking picture.

Find an application worth considering? Then send for your personal copy of the POWASERT folder; contains the full story of POWASERT automatic fastening equipment. Call or write: United Shoe Machinery Corp., 140 Federal Street, Boston, Massachusetts.

Fastening Advances . . . Automatically Yours With

United POWASERT®

POWASERT fastens:

- metal strips to pallets
- ¼" plywood to 1/16" soft steel tubing
- aluminum frame to brackets on masonite sheet
- truss plates
- leg ferrules to wooden legs without pre-drilling
- galvanized sheet steel to oak on hand planters
- headlight frames to headlights
- strapping on paint brushes to handles
- pre-drilled steel rules to benches

USO-77

FOR DATA CIRCLE FDM NO. 1415

M. C.—KEY TO PROFITS
FROM PAGE 31

the results to be at the end of the assignment.

If you are in doubt about your attitude or as to the advisability of using consulting services for meeting your particular needs, one practical way to resolve your doubts is to select a reputable consulting firm and hold a preliminary discussion. Then discuss what is the problem, how it would be tackled and what the estimated cost would be. Any reputable consultant will be glad to explore these questions as he is no more anxious than his client for an arrangement that is not likely to work out to the satisfaction of both parties.

How do you find a reputable and "right" m.c., is probably your next question.

For one, you can obtain names from the Association of Consulting Management Engineers, who will send you its Directory of Membership and Services (write to A.C.M.E., 347 Madison Ave., New York 17, N.Y.).

A.C.M.E. was established about 30 years ago as the result of the "efficiency experts" and the rest of the disreputable crop that sprang up after World War I. A.C.M.E. is continually striving to increase the value of the services rendered by m.c.'s and its members must live up to a strict code of ethics and standards. Of course, there are many reputable firms who are not members. For example, there are many very small firms and individual m.c.'s who though unquestionably well qualified in their special fields, do not meet the minimum size required for A.C.M.E. membership.

So, where else do you check? Perhaps the best and ultimate source is to be found in other companies that have used or are now using the services of a consulting firm. A.C.M.E. reports that about three out of four management consulting assignments result from recommendation of a satisfied client.

An example of such a recommendation is demonstrated by the following excerpts of a letter of recommendation, from the plant manager of the Fort Smith Couch & Bedding Co. . . . "In reply to your letter . . . please be advised that we have engaged the John A. Patton Engineers (merged with George Fry & Associates, November, 1959) on two different assignments in connection with a comprehensive modernization program in our plant. The results of this engineering work are now becoming quite clear . . . we have realized an approximate 30 per cent increase in production for relatively the same payroll dollar. These programs were completed in a reasonable time in relation to the estimated cost of the job and we would recall the same firm as the need is indicated."

John Patton stresses that management should do everything possible to locate a consulting firm which has had experience either in the same industry or with similar problems—preferably both. There are quite a number of m.c.'s who have worked successfully with furniture clients, if you'll take the trouble to investigate.

Other questions to consider when seeking a m.c. are: do you want to employ a consulting firm or an individual consultant? For example, there are a number of brilliant individual consultants working in more or less specialized fields. If your problem lies in one of these fields, then one of these may be "your man." At the

Now! Plastic-surfaced T-moldings that match your counter or table-top

A continuous plastic surface pattern . . . the easy installation of metal moldings. Now you can get both with the new Kalwood all-plastic T-molding.

Kalwood T-moldings are made with a tough, durable plastic surface permanently bonded to a precision aluminum extrusion. Colors and patterns are available to match all plastic laminates — Formica, Pionite, Nevamar, Panelyte, Parkwood, etc. Match is perfect.

Kalwood T-moldings have no exposed metal surface — can be rapidly installed. Ask your laminate dealer about them — or write directly to Keller Products.

keller products inc.

Dept. K-100 41 Union Street, Manchester, N. H.

FOR DATA CIRCLE FDM NO. 1392

same time the consulting *firm* is coming more and more to the fore since, obviously a firm of individuals can usually offer a greater range of services, and can tackle a complexity of problems all at one time.

Another question, do you want to employ a large firm or a small one? This can be argued back and forth but generally it is found that each assignment gets approximately the same amount of top level attention in the large firm as in the small. As long as a firm does good work, it does not particularly matter how large it is.

One more question: do you want a tested, standardized solution to your problem or would you prefer a more creative approach? Ask yourself, are you an aggressive manager or do you just want what your competitors have? If the latter, then engage a consultant with long experience in the furniture industry. On the other hand, perhaps you would like to try for something better and bigger. In this case, seek a consultant with a reputation for coming up with fresh, imaginative approaches, one who may be termed "research minded."

Suppose you've obtained the names of several m.c. firms. How do you further check on them? Most m.c. will be glad to supply the names of several clients who can be queried directly. Furthermore, they will also supply you with information about the scope and nature of assignments on which they have worked. Patton further recommends visiting some of the plants served and to talk personally with one of the officers of each firm. "It is always a surprise to me in this business," he adds, "to find how thoroughly management will check a piece of equipment for which a large amount of money is going to be spent, yet hire the first consultant who walks in the door."

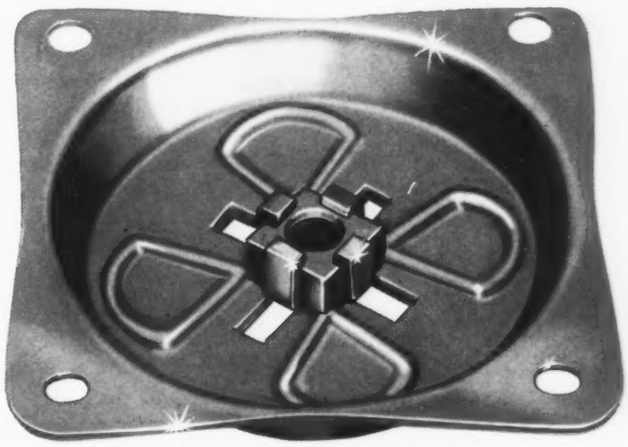
Standard investigating agencies, such as the Better Business Bureau, Dun & Bradstreet, and credit associations, should always be checked also. Bank officials often supply valuable leads to consultants who have successfully worked for companies and organizations known to the bank.

What hapens next, after you've decided on a firm? The partners or principals of the firm will make the arrangement with you. A.C.M.E. reports that contracts and formal documents are rare. After an exploratory examination, there is usually an exchange of letters indicating the objective and scope of the work to be performed, the estimated fee for the completed job, and a suggested timetable of performance.

And what about the cost? Good management consulting does not come cheap—and should not. For one thing, high calibre personnel are required. The senior members of many m.c. firms are greater specialists in their particular fields than comparable men in industry; they have to be in order to meet the demands that are put on them by the specialized problems they are called on to solve.

Fees are usually estimated in the form of a minimum-maximum range for the specific assignment, plus traveling and other out-of-pocket expenses. Lump-sum arrangements are rare since it's almost impossible to predict just what problems will occur and how much work will be required to do an adequate job. Estimates are most often figured on a per-diem rate for the consulting staff's time, com-

TO PAGE 34



BELIEVE IT OR NOT
YOU'RE LOOKING AT A

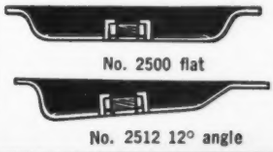
2c (TWO CENT) 2c

Victor CLINCHED NUT PLATE

with full machined 5/16" nut

CLOVERLEAF EMBOSSING FOR STRENGTH so you can use this money saving plate for all but the heaviest upholstered furniture. Newly engineered nut attachment is stronger than ever.

AMERICAN-MADE QUALITY AND SERVICE. You can still save with our "import" prices without sacrificing Victor's established advantages in quality and service.



PAT. PENDING

3000 plates or more	2c ea.
bags of 1000 plates	2½c ea.

less 5% discount for orders of 25,000 pieces or more

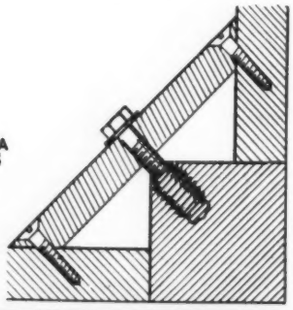
Victor SUPPLY COMPANY
"We lead, others follow."
1514 WEALTHY ST., S.E.
GRAND RAPIDS 6, MICH.
PHONE GL 6-1335

FOR DATA CIRCLE FDM NO. 1419

Make Wood Joints Faster and Better with

Fast-Set DOWEL BUSHINGS

For solid, rugged construction, join legs on chairs, sofas, beds, tables, dressers and cabinets with FAST-SET Dowel Bushings. Can be driven in on any side of wood where either arm, leg or section will be attached. If leg is to be attached to veneered top, simply drive dowel bushing on bottom side into a pre-drilled hole by using an automatic driving tool.

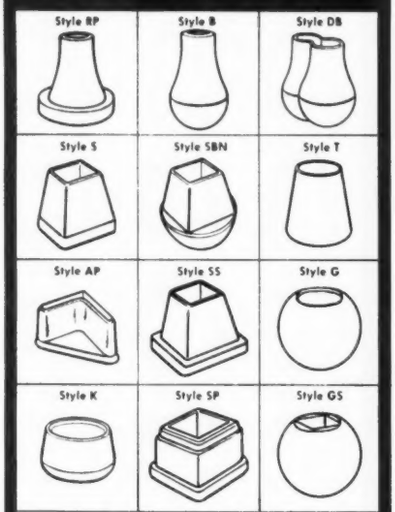


WRITE Dept. A FOR SAMPLES AND DETAILS

B&S Sales Co. 240 W. FIFTH STREET ST. PAUL 2, MINNESOTA

FOR DATA CIRCLE FDM NO. 1384

STOCK PLASTIC TIPS and CAPS



Available for immediate shipment
POLYETHYLENE or BUTYRATE
leg tips of above styles in a wide range of sizes and colors.
FOR FURNITURE • TOYS • TOOLS • RACKS
HANDLES • HARDWARE • APPLIANCES
Slip on easily — press it — manufactured to precise tolerances.
FREE SAMPLES and LITERATURE
Write for prices and size tips you need.

McMASTERS, Inc. PLASTICS BOX 304 EVANSVILLE, IND.

FOR DATA CIRCLE FDM NO. 1397

bined with an estimate of how long the job will take.

It is always a temptation for the company to try to get the m.c. firm to reduce its estimate of the time required to complete the assignment. This is unwise. The unethical firms, of course, will promise anything to get started with the result that you will either get a poor quality job or a later request for a time extension. A reputable m.c. firm is no more anxious to take too long than you are since, after all, it knows that it must be competitive in its costs.

In the final analysis, the cost will be negligible if the desired results are achieved. Many case study figures could be cited to illustrate how a furniture manufacturer has obtained his "money's worth" as the result of hiring a consultant. To mention but one example, the president of the Fort Smith Couch Co. who hired the John Patton Engineers, reported that in 1953 sales were approximately three million dollars. By 1957 the company had gone over the four million mark, with much of "this increase in dollar sales volume directly due to the improved service to dealers in which the truck delivery system (recommended by the engineers) played an outstanding part." Any number of "testimonials" could be cited, many with even more spectacular statistics.

In the long run, however, the cost of consulting work is the least important factor in ultimate satisfaction. Have you ever known a manager to say that he was satisfied with a consulting job because it was cheap? What you are paying for are the services of highly trained, skilled and experienced men who will solve complex problems, whose solutions will bring savings and profits for years to come.

Once you hire a consultant, how do you work with him? Does your responsibility end with the hiring? First of all, before signing an agreement, you and your consultant must have complete understanding of each other's responsibilities, that is, just what the problems are and how the work will actually be performed.

A consulting assignment is basically a team effort. You will have to work with your m.c. and cooperate every step of the way if you wish to receive the full benefit of his services. Not only should *you* cooperate but all the other officers and employees in your plant as well.

John Patton strongly urges that there should be proper indoctrination of personnel before a consultant starts. "The experienced consultant knows he will be resented the moment he puts his foot in the client's door. He should insist upon proper indoctrination before starting his work, for the right frame of mind is essential if real cooperation is to be achieved." He also suggests that someone from top management be assigned to work closely with the m.c.

It is also a good idea to have periodic meetings with the consultant to discuss progress on the work and to evaluate tentative conclusions. Successful results often stem from mutual stimulation of thought between you and your consultant. At the conclusion of the assignment, it is usual practice for the consultant to submit a written report summarizing and documenting in detail his conclusions and recommendation or plan of action. These recommendations are presented to you for your decision. *But you must decide.* That is your proper managerial function.

Once the decision is made you can either ask the consultant to stay with you and help make the new program work, or, to return periodically to evaluate progress, correct misunderstandings and make modifications as necessary. Always, it is a matter of teamwork. A m.c., for example, cannot be expected singlehandedly to gain the cooperation of a union made hostile by many years of strained labor management relations. He can, of course, be most helpful for he is trained to handle people well, but he will need your full support and cooperation to do his best work.

In what specific ways can consultants help the furniture manufacturer? There are entire books published which explain the many industrial areas within a company aided by consultants, but the following *scope of services* will give some indication. This list is suggested by Serge A. Birn Co., Inc., consultant management engineers, with offices in Louisville and New York, specialists in the furniture and woodworking fields. They are: management audits; surveys of all types (from labor conditions to sales performance); job evaluation—merit rating; financial (wage) and non-financial incentives (based on work measurement-time studies); methods

improvement; timestudy; industrial relations; training, at executive and sales levels; personnel testing; executive and cost control; and lumber yield.

The Birn Co. has become famous for certain techniques developed which have benefited many furniture manufacturers. One is the methods-time measurement, a work measurement procedure for production increase and cost reduction, based on setting time standards without the use of a stopwatch. *Predetermined time standards* for all basic motions have been set up. In fact, the company has developed basic methods-time measurement standard data for most case goods and upholstery operations. Availability of these data enable Birn engineers to do most engineering assignments in about half of the time previously required.

Believing that incentive programs are the best way for a manufacturer to reduce costs, the Birn Co. is also well known for the many types of incentive plans it has developed. One of these is the saving-sharing plan developed for small and medium size furniture plants where conventional incentive plans are often too difficult to manage. The plan is a system whereby an employee in each department—or group within a department—shares in the savings made in his department. Such a plan does not require continuous time studies and rate setting.

FURNITURE DESIGN AND MANUFACTURING:

Your September, 1960, issue is most interesting. The marketing and design articles were all of interest to me, however, the article "I. E.—Your Key to Improved Profits" by Nancy Ladd, was right down my line. Would it be in order for a footnote on the second article to mention the Furniture Manufacturing and Management Course at North Carolina State College which trains students specifically for industrial engineering in the furniture industry?

I would also like to mention that Production Development Company, Inc., employs several industrial engineers under my direction. We are continuously installing efficient manufacturing methods in furniture factories throughout the United States and foreign countries where we combine good management principles, industrial engineering practice and wood technology know-how.

Production Development Company, Inc.
E. Sigurd Johnson, President

The Birn Co. has found that one weakness of many furniture firms involved with woodworking operations is that they have no lumber yield standards, thus no effective yield control, and in turn, no way of determining true costs. Birn has conducted yield studies for clients designed to determine true lumber costs, reduce lumber waste, set yield standards and, most important—determine the most economic grade for given cuttings.

Birn feels that many more furniture manufacturers could and should avail themselves of consulting services. He points out, "The reason consultants often have a hard time selling their services and ideas to the furniture industry is that most small and medium-sized furniture manufacturers are unlike those in other industries.

"Frequently their background is lumber business or furniture wholesaling, so that the fundamentals of production problems are relatively unknown to them. On the other hand, just because of their frequent nonmanufacturing background, many furniture manufacturers have fallen prey to unscrupulous racketeers calling themselves consultants. The woods are full of them." (An impressive, long

TO PAGE 64

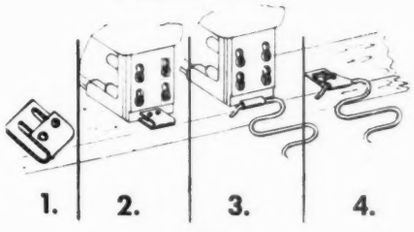
NOW SPOTNAIL SPRING CLIPS

4 Times Faster!

This new method is a real labor-saver for the furniture manufacturer. Two staples are positioned and driven in seconds, instead of 4 nails being laboriously hand driven. No need to hammer down the clip, as with jig-driven cut nails or less efficient air guns. This new Spotnail method saves up to 75% of the man hours required to hand nail spring clips.

Spotnailing does a better job too. No splitting of frame when DC Spotstaples are used. Up to 30% better holding power, as a result. Clips are positioned automatically and the staples driven perfectly. No "shiners" to tear fingers and fabrics.

HERE'S HOW



1. Place the spring clip in position.
2. Place Model LHL Spotnailer with cut-out plate over the spring clip. Spot the first staple through the two holes and into the frame, automatically.
3. Hook the spring into the clip and slide the Spotnailer into place. The same gun now positions the staple over the second set of holes in the clip.
4. A touch of the button or trigger drives the second Spotstaple with over 5000 pounds impact force, neatly bradding over the spring clip as the staple is driven. Only Spotnailers offer this power, using 40% of air required by guns of equal piston displacement.

Phone or write for a demonstration in your plant.

SPOTNAILS, INC. 1527 LYONS ST., EVANSTON 33, ILL. UNiversity 4-3011

FOR DATA CIRCLE FDM NO. 1410

Fashion Flared Legs

Victor leads again with new, new styling at low, low prices . . .

1⅞" TD, ⅞" BD with ¾" Brass Plated Glide								
Length	6"	7"	8"	9"	10"	12"	14"	16"
1000 or more	.32 ea.	.34 ea.	.36 ea.	.38 ea.	.40 ea.	.44 ea.	.48 ea.	.52 ea.
100 to 1000	.34 ea.	.36 ea.	.38 ea.	.40 ea.	.42 ea.	.46 ea.	.50 ea.	.54 ea.

Also available in 18", 22" and 28½" lengths on special order.

New, solid brass "Fashion Flared" ferrules are used to accent the finishes; choice of blonde, ebony, walnut or mahogany. Kiln dried Northern hardwoods.

Attach with our patented Clinch Nut Plates.

#7 sq. flat 4c ea. #7A sq. 10° 4c ea.
#20 tri. flat 6c ea. #10 tri. 10° 6c ea.
#15 tri. 15° 6c ea.

Victor WOOD PRODUCTS CO.
1514 Wealthy St., S.E., Grand Rapids, Michigan
Phone GL 4-8224 "We lead, others follow"

FOR DATA CIRCLE FDM NO. 1417

CURVED PLYWOOD?

Made to specification

High-Frequency bonding on low cost forms

Tell us your problem — we'll solve it to your specifications. We manufacture unusual plywood shapes for applications ranging from church pews to water skis . . . table legs to torpedo cradles. Our high-frequency presses mass-produce curved parts fast and at lower cost than other methods, and with greater stability. We have over 200 stock dies available for stock shapes. Write, wire or phone RI 2-2474 for quotations and complete engineering service.

PLY-CURVES INC.

1615 Monroe Avenue, N.W., Grand Rapids 5, Michigan

FOR DATA CIRCLE FDM NO. 1406

KENT-COFFEY DESIGN PROGRAM

CONTINUED FROM PAGE 23

The specialized Plant No. 2 opened in April, 1959, covering a 45,000 sq. ft. area for assembly, finishing, rubbing, packing and warehousing. "This plant is set up almost like Baker would do", reported Miller. "Cases are moved on skids by hand".

The plant is considered as an offspring of the parent Plant No. 1. In effect, No. 2 "buys" dimension stock from No. 1. The plant is located on a 60-acre tract near the outskirts of Lenoir, N. C., affording opportunity for future physical growth.

Even before Kent-Coffey decided to broaden its line in design concept, Plant No. 2 had become necessary due to the public's demand for larger case pieces. A company executive recalled, "In 1950, a super-king-size dresser was 60 in. wide; today, we make many 72 and 74-in. dressers, and some are up to 100 in." The firm is also producing a triple wall unit for contract merchandise which runs 102 in. and combines desk, storage space, television stand, and luggage rack.

Continuing the analysis of big pieces, the same official said, "Today we make quantities of dual beds—six ft. six in.—and multi-purpose beds that are increasingly popular and which sell profitably. We sell many extra-length bed rails too, because the cheapest way for a homemaker to set up a bed is by buying a frame, two sets of box springs, and one mattress".

According to Coffey, about 70 per cent of the business in large pieces takes place within a 100 mile radius of New York, including Philadelphia. On the other hand, certain cities like Chicago do not go for mammoth pieces. Another exception is Florida, a tourist state, where 75 per cent of the beds sold are twin pieces, as contrasted with ten per cent twins in other parts of the country. California tallies average.

With the trend towards larger pieces has come an inevitable reduction in number of pieces. A typical bedroom suite in 1960 might consist of one large bed and dresser and two night stands. An alternate arrangement might be bed, vanity-desk and bachelor's chest. The former conventional full bedroom suite of dresser, chest, two beds, and one or two night stands might end up today furnishing two bedrooms.

Mirrored pieces are not as much in demand as they used to be. Many homes have built-in mirrors for bathroom and door accessories.

Kent-Coffey does not intend to stop its broadened program with the present expansion of plant facilities and enlarged design concept to include Provincials. It is experimenting in other directions. An example is the small-scaled bedroom group called "Scenario", made on request of a large department store chain. The line is intended for teen-age girls and for merchandising mainly in metropolitan stores. "Scenario" features a white lacquered finish with white plastic tops and gold trim.

A company official declared, "The average teen-age girl is disappointed when she comes home to find a massive chest which her mother bought. We've tried to find a solution to that situation and we believe we have. When we opened our showrooms in May to test consumer response on a special occasion, 'Scenario' got a wonderful reaction from the public".—*Carolyn Knuemann*

CONTINUED FROM PAGE 12

AMOS MOLDED PLASTICS, *Div. of Amos-Thompson Corp.*, Edinburg, Ind., announced a reduction in prices on its molded plastic drawers and guide systems. The drawers, molded from Lustrex styrene, are available in four standard sizes and are adaptable to over 100 different furniture designs, the firm reports.

SUPREME WOODWORKING MACHINERY CORP., distributors of American and European woodworking machinery and parts, opened new offices and an exhibit hall at 134-40 180th St., Springfield Gardens, Jamaica, N.Y. The new structure will also serve as a warehouse.

MORNINGSTAR-PAISLEY, INC., Atlanta, Ga., began production of a complete line of industrial adhesives in its new plant which also serves as a warehouse and service facility.

HARDWARE DESIGNERS, INC., South Hackensack, N.J., announced expansion of its "Loctrac" for sliding cabinet doors to include five colors. Originally manufactured in neutral brown, it can now be purchased in 100-ft. coils of blonde, grey, black and white. The firm also reports that special colors can be supplied to meet specific production requirements.

WOLVERINE FINISHES CORP., manufacturer of custom wood finishes, has merged with *Rinshed-Mason Co.*, manufacturer of industrial paints and chemical coatings. The Wolverine name will be retained and applied to its products. *William J. Branstrom, Jr.*, former president of Wolverine was named vice president of Rinshed-Mason Co. and general manager of its southeastern division.

FORMICA CORP., Cincinnati, Ohio, announced it will sell its decorative laminates on a direct sales basis to the furniture industry, effecting a close coordination between laminate production facilities and particular demands of furniture designers and manufacturers.

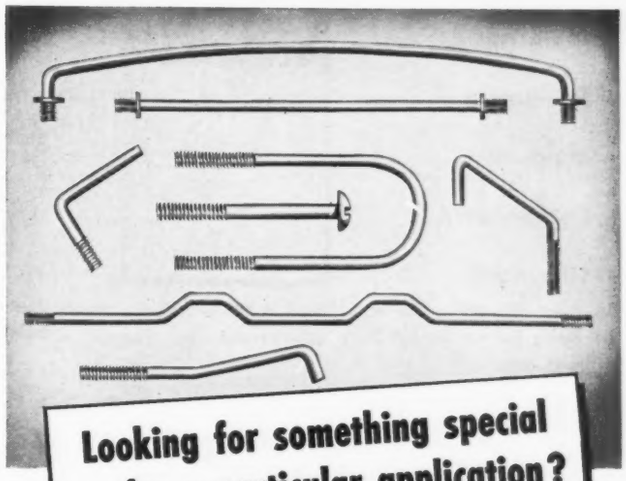
POLYMER INDUSTRIES, INC., Springdale, Conn., producer of industrial adhesives and textile polymers, has completed a million dollar plant expansion program which doubles its laboratory, production, office and warehousing space.

UNITED LACQUER MANUFACTURING CORP., Linden, N.J., manufacturer of industrial and specialty finishes, announced plans for expansion of its production and warehouse facilities to meet national and international markets.

SUN CHEMICAL CORP., New York city, manufacturer of chemicals, coatings, finishes, and specialty products, elected *Eugene Jacobson* vice president. He was formerly president of *Facile Corp.*, manufacturer of laminated products into furniture upholstery, tapes and packaging materials, which was purchased by Sun last year.

HANSON-VAN WINKLE-MUNNING CO., Grand Rapids, Mich., announced the completion of expanded facilities of the J. C. Miller division, increasing its line of proprietary and other chemicals for electroplating and metal-finishing by 300 per cent.

TO PAGE 59



Looking for something special ...for a particular application?

...rely on Ohio Rod Products for—

SERVICE—QUALITY—UNIFORMITY

OHIO ROD makes Special Headed and/or Threaded Fasteners in short and long length – in short or long runs. Headed, Threaded, Collared, Bent, or Offset.

Send drawings or blueprints for quotes and literature.

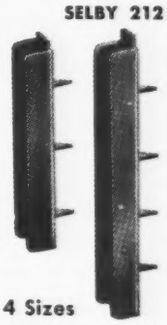
OHIO ROD PRODUCTS CO., INC.

20254 1st AVENUE • BEREA, OHIO

FOR DATA CIRCLE FDM NO. 1403

Selby DRAWER CHANNEL

SELBY 212



Brass Plated For Drawer Partitions

• Easiest Installation
• Low Cost

4 Sizes

1¾"	x	¼"
1¾"	x	5/16"
2½"	x	¼"
2½"	x	5/16"

Write today for complete SELBY Catalog.

SELBY FURNITURE HARDWARE CO.
11 W. 17th St., New York 11, CHelsea 2-3432

FOR DATA CIRCLE FDM NO. 1409

HARDWOOD FURNITURE PARTS and MOLDINGS

ASH·OAK MAPLE POPLAR WALNUT

Specializing in OAK DRAWER SIDES

HARCO

WILLIAMS-BROWNELL Inc ASHEVILLE, NORTH CAROLINA

EST. 1905

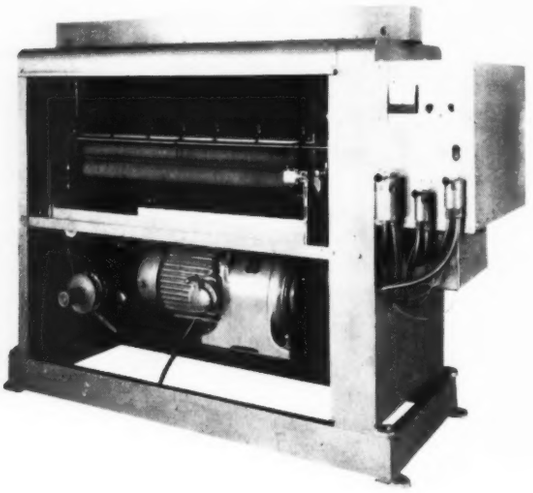
P. O. Box 1091 — ALpine 2-5341

FOR DATA CIRCLE FDM NO. 1421

- **Materials**
- **Equipment**
- **Supplies**
- **Components**
- **Literature**

FDM IT'S NEW

For more information on items listed in the IT'S NEW Columns use the handy Reader Service Card opposite page 18. Complete details on these items will be sent to you by the manufacturer.



Machine Speeds Surfacing Operations

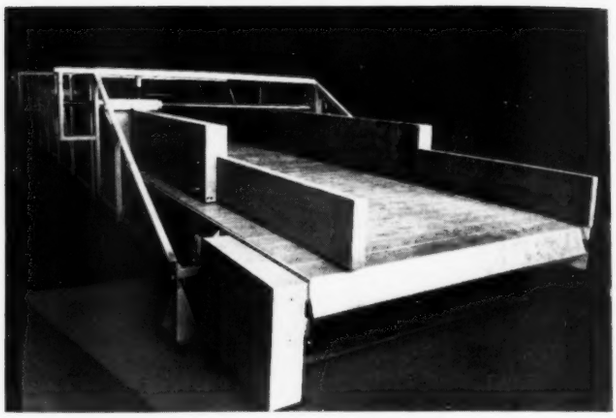
A Tri-Matic oscillating sheet surfacer, which employs impregnated nylon mounted on an oscillating arbor, is available from Sales Service Manufacturing Co. Workhead drive can be equipped for single or variable speed and feed rolls have variable speed drive. Work pressure is positively controlled and electrically metered for constant pressure as workhead wears and for repeating set-ups accurately, the firm reports. The surfacer is available with practically any length workhead from 48 in. up and with multiple heads on the same work conveyor. Workhead arbor can be loaded with abrasive impregnated nylon material to any width up to maximum. The unit can be furnished for either dry or wet operation.

For More Information Circle Reader Service Number 553

Fast Setting Forming Board in Two Grades

A forming board utilizing thermosetting resins has been developed by the Consolidated Paper Co. that can be formed in a press dwelling time of five to 15 seconds, providing a high production rate to users. Two grades, PR 25 and PR 40, contain 25 and 40 per cent phenolic resin respectively, which has been uniformly dispersed in reprocessed kraft fiber. The short dwell time, coupled with pressures of 300 to 500 p.s.i., partially cures the resin, and is sufficient for many uses.

For More Information Circle Reader Service Number 554



Conveyor Designed For Continuous Foaming

A continuous Armorbelt foam conveyor, designed specifically for the plastic foaming industry, has been announced by the M-H Standard Corp. It is pivoted at the pouring end and equipped with a handwheel operated raising mechanism to adjust the conveyor the correct downward slope for proper foaming. The pouring end has side fences to support the pouring paper. Provision is made in both conveyor and side fences for heating the foam blanket. A remote controlled variable speed drive allows operator to conveniently change speed during operation and an automatic takeup compensates for temperature changes. The unit comes in widths up to eight ft. in any length.

For More Information Circle Reader Service Number 555

Safety Cut-Off Saw In Two Models

Two new, high production safety cut-off saws have been developed by Irvington Machine Works. The No. 17, shown on the left in photo, is an undercutting table saw featuring arm's length distance of operator from cutting action, elimination of danger of kicking, and complete covering of the saw in retracted position. The No. 18, pictured on right, is an up-cutting table saw featuring complete guarding of the saw through cutting cycle, full control of operation, and special guard-clamp device which clamps work securely during entire cutting cycle. The unit has short stroke and fast cycling for quick, accurate, high-speed production, reports the manufacturer.

For More Information Circle Reader Service Number 556

TO PAGE 40

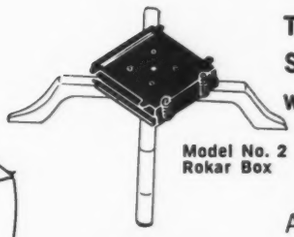
FOR THE PROFIT CONSCIOUS

MIDDLETOWN

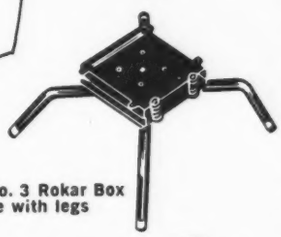
PRESENTS

ADJUSTO-ROKAR

Model No. 1 Rokar Box and x braces



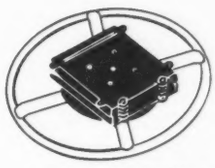
Model No. 2 Rokar Box



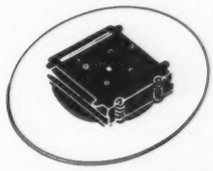
Model No. 3 Rokar Box complete with legs

The magic unit combining Swivel and Rocker Springs with Tension Adjustment.

Adjusto-Rokar Models 1, 2, & 3 are for low back, four legged rocker chairs; 4, 5, 6, 7, & 8 are for high back five legged or circle based chairs. Please order sample accordingly.

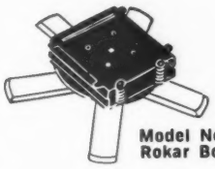


Model No. 4 Rokar Box



Model No. 6 Rokar Box

Model No. 8 Rokar Box complete with 5 legs



Model No. 5 Rokar Box

Model No. 7 Rokar Box complete with 5 tubular Braces

ALL ADJUSTO HARDWARE FULLY GUARANTEED

MIDDLETOWN

MANUFACTURING
COMPANY
515 MAIN STREET
MIDDLETOWN, KENTUCKY

FOR DATA CIRCLE FDM NO. 1398

New!
IT LEVELS
WITH A TWIST OF THE WRIST!

Pat. App. For

Here is a leveler that clips into hollow metal tubing and holds *TIGHT*

Check these features:

● *Umbrella type spring* ● *Washer fits inner tube wall* ● *Hardened steel and rubber cushioned base* ● *A twist of the base is all you need to level your appliance.*

Steel cadmium washer acts as centering device. Available in nickel, brass lacquered finish, or type 430 stainless steel shell. Sizes from 5/8" round and 3/4" square.
If you have a leveling problem, our engineering Department will be glad to help you solve it.

Write today for FREE Bulletin No. 160

ROBERT E. *Miller* & COMPANY INC.

DEPT. FD-10
35 PEARL STREET
N. Y. 4, N. Y.

FOR DATA CIRCLE FDM NO. 1400

LOOK WHAT AUTOMATION HAS DONE TO THE PRICES OF VICTOR

SLENDERIZED LEGS!

Victor leads in value with new low prices. These prices have been made possible by automation and modern manufacturing methods without sacrificing quality. We call it "operation money-saver" and you reap the benefits.

1 3/4 TD, 5/8 BD							
Length	6"	7"	8"	9"	10"	12"	14"	16"
1000 or more	.32 ea.	.34 ea.	.36 ea.	.38 ea.	.40 ea.	.44 ea.	.48 ea.	.52 ea.
100 to 1000	.34 ea.	.36 ea.	.38 ea.	.40 ea.	.42 ea.	.46 ea.	.50 ea.	.54 ea.

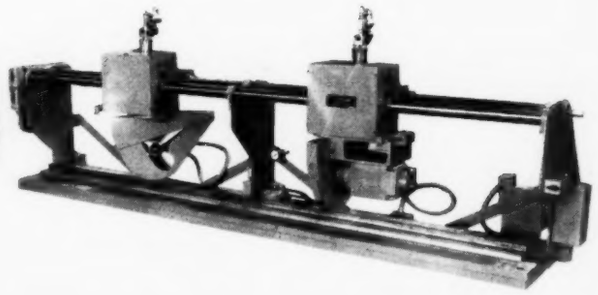
Kiln dried hardwoods, finished in choice of Blonde, Ebony, Walnut or Mahogany.

Attach with our patented Clinch Nut Plates.
#7 sq. flat 4¢ ea. #7A sq. 10° 4¢ ea.
#20 tri. flat 6¢ ea. #10 tri. 10° 6¢ ea.
#15 tri. 15° 6¢ ea.

Victor WOOD PRODUCTS CO.
1314 Wealthy St., S. E.
Grand Rapids, Michigan, Phone GL 4-8224

FOR DATA CIRCLE FDM NO. 1418

IT'S NEW/FROM PAGE 38



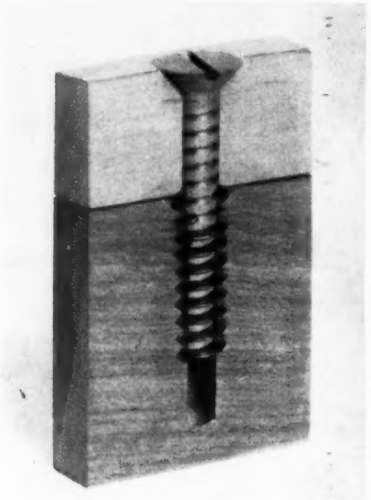
Automatic Chop Saw Has Double Blades

A Model KVAL No. 1040 double blade chop saw, designed to meet trim cutting requirements, is offered by Kvalheim Machinery Co. The two blades come down simultaneously to cut trim material to exact length and correct mitre. Each blade can be rotated from 90° to 45°, making it possible to cut trim with two 45° ends or one end 45° and the other 90°. Air cylinders are used for up and down movement of the direct motor driven saw blades. The cylinders are acuated either by a foot switch or a limit switch mounted on the table. When trim material is positioned to be cut, the limit switch is tripped to move the saw blades into the work. The saw units are adjustable toward and away from each other by the use of a gear motor and forward reverse switch.

For More Information Circle Reader Service Number 557

Wood Fastening System Doubles Holding Power

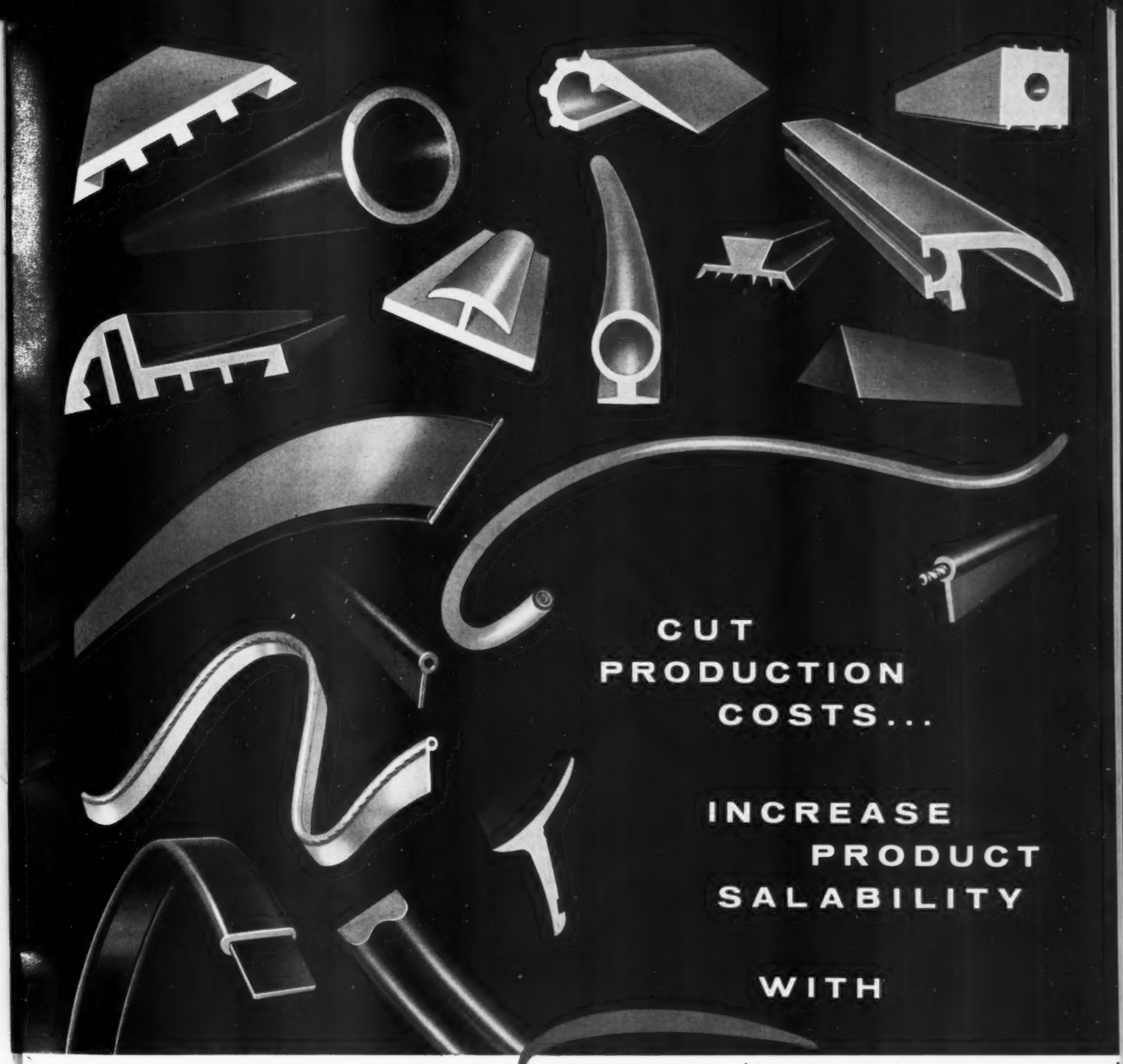
A self-tapping wire screw thread insert, designed to give lifetime strength and reusability to screw thread joints in products made of wood, particleboard and related fibrous materials, has been developed by Heli-Coil Corp. The firm reports the insert gives up to two and one-half times the holding power of standard fasteners. Increased holding power is attributed to the fact that its pitch is half that of standard machine screws, allowing it to leave relatively thick sections of wood between threads, eliminating the breaking up of fibres between threads which contributed toward weakness of standard fasteners. The insert is made of carbon steel, formed with a precision diamond-shape cross-section. Installation can be accomplished with a variety of hand or power tools.



For More Information Circle Reader Service Number 558

TO PAGE 42

FOR DATA CIRCLE FDM NO. 1408 ⟶



Sackner

EXTRUDED PLASTICS!

- **COLORS** A whole rainbow of exciting colors to make products more attractive, more salable. The sky's the limit, including fluorescents, metallics, two-tones and other specialties.
- **PERFORMANCE ENGINEERING** Each Sackner extrusion is engineered for its specific job. No shape is too complicated . . . every degree of hardness or flexibility is available . . . combinations of plastic with other materials, such as wire, steel strap, paper, jute, fibre cord, etc., are our specialty. We meet your exact performance requirements.
- **QUALITY** Sackner's reputation is your assurance of precision compounding and processing for absolute uniformity. Our complete engineering staff, working with the most modern equipment, will make it right the first time . . . and keep it right on each succeeding order.
- **SERVICE** Sackner can serve you better, faster, and with greater personal attention to your needs. Forty-four years of leadership. Seven plants throughout the nation. Complete sales-service force always ready to consult with you.

LET US SHOW YOU! SUBMIT SAMPLES OR SPECIFICATIONS OR LET US ANALYZE YOUR PRODUCT FOR APPLICATION OPPORTUNITIES. WE'LL PROVE THAT SACKNER "PERFORMANCE ENGINEERING" CAN BOOST PROFITS FOR YOU!

SACKNER PRODUCTS, INC.

901 OTTAWA AVE., N.W. • GRAND RAPIDS 2, MICHIGAN

FIBRO-KANE WEBBING

- Has the attractive variegated appearance of natural cane.
- Is much lower in cost, permitting its use in many applications where natural cane has proved too expensive in the past.
- Is easy to apply and finish — can be stained to harmonize with various woods.
- Does not become brittle with age. No undesirable loose "hairs" or splinters.

Samples and full particulars on request.

E. W. TWITCHELL, INC.

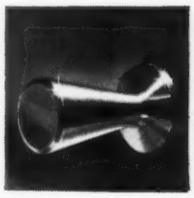
3rd and SOMERSET STREETS
PHILADELPHIA 33, PA.

FOR DATA CIRCLE FDM NO. 1414

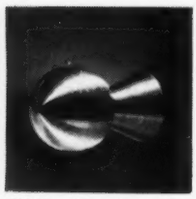
EPCO

KNOBS for Cabinet Doors and Drawers

- Machined from Aluminum or Brass Bar Stock
- Beautiful Jewel-like appearance
- Easy to install

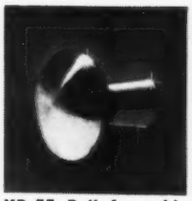


KP-50 Pull for cabinet doors in clear anodized aluminum or lacquered solid brass bar stock. Other finishes available.

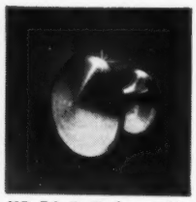


KP-51 Pull for cabinet doors in anodized solid aluminum or lacquered solid brass bar stock. Other finishes are available.

These new pulls are carefully designed to give lifelong beauty and service. Each fulfills all the necessary requirements for easy operation, clean and handsome appearance, ease of installation and freedom from maintenance worries.



KP-55 Pull for cabinets and doors in anodized solid aluminum or lacquered solid brass bar stock. Other finishes available.



KP-56 Pull for cabinets and doors. In anodized solid aluminum or lacquered solid brass bar stock. Other finishes available.

SEE SWEET'S CATALOG
For the complete EPCO line under Architectural File No. 18g-En and Light Construction File No. 7a-En.

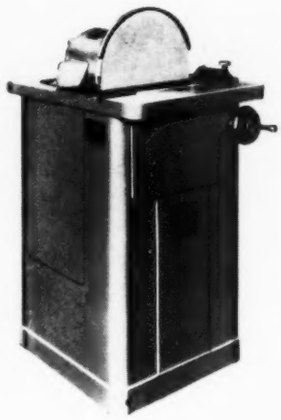
FREE 20-PAGE CATALOG
On the complete EPCO line of magnetic and friction catches, E-Z glide track and glides, and drawer pulls will be sent on request.

THE ENGINEERED PRODUCTS CO.
P.O. BOX 118 - FLINT, MICH. - PH. CEdar 9-8689

FOR DATA CIRCLE FDM NO. 1379

IT'S NEW/FROM PAGE 40

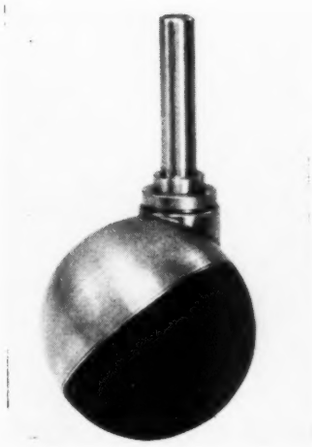
Tilt-Disc Sander



A 14-inch tilt-disc sander, featuring rugged design, rigidity and power for producing accurate, quality finishes on wood, plastic, or metal is available from Yates-American Machine Co. The unit features unitized tilting disc assembly which combines the direct motor drive, sanding disc and safety guard, allowing use of a stationary work table. Disc tilt ranges from 15° forward to 45° back.

For More Information Circle Reader Service Number 559

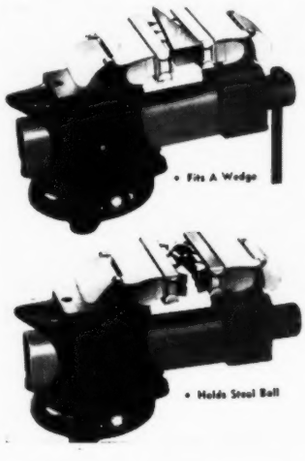
New Caster Line



A line of round casters called Gyro-rol, which operate on a patented orbital principle with the wheel section revolving angularly around the base, has been introduced by Master Manufacturing Co. The caster is designed for all types of furniture and comes in antique copper, satin chrome, bright chrome, satin brass and bright brass finishes. They are manufactured with all standard stems.

For More Information Circle Reader Service Number 560

Auxiliary Vise Jaws



Uni-grip auxiliary vise jaws which convert machine vises into Universal vises to grip and clamp round, angular and irregular shapes, are being distributed by Mid-American Import Co. The faces of the jaws are of case-hardened steel wedges which automatically conform to irregular shapes when vise is closed. Free-swinging counter balances hold them in place without screws or clamps.

For More Information Circle Reader Service Number 561

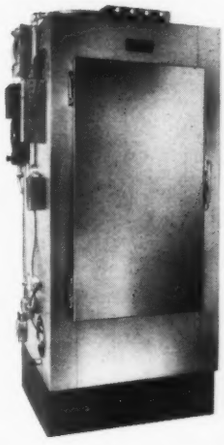
Extruded Panel Retainer

A completely flexible extruded panel retainer, in coil form, has been developed by Ronthor Reiss Corp. It is installed by merely inserting it in groove and can be used on grill, glass or panels. The retainer eliminates the manufacture and finishing of quarter round, intricate shaping operations, mitering, stapling and nailing, reports the manufacturer. It is available in shades to blend with any painted or wood finish.

For More Information Circle Reader Service Number 562

Climate Chamber

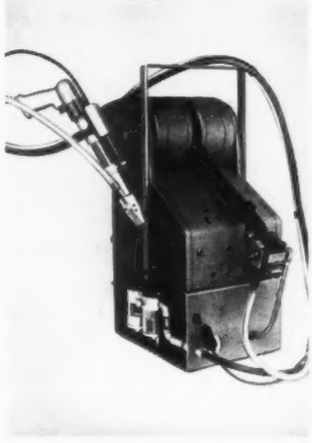
A climate chamber capable of establishing and maintaining pre-selected degrees of temperature and percentage of relative humidity has been announced by the Herrmidifier Co., Inc. The unit is custom-built to fit individual requirements of space, ambient conditions, temperature and humidity range. The firm reports it will maintain temperature and humidity to less than 1° variance.



For More Information Circle Reader Service Number 563

New Screwdriver System

A Tru-Tork automatic screwdriver system which sorts, meters, and installs all types of screws, pins, bolts, rivets and studs at rates up to 7,000 per hour, has been developed by Clyde Engineering and Manufacturing Corp. Standard unit consists of compact hopper unit with positive electrical switch-controlled feed and standard power screwdriver, pneumatically fed at 40 lbs. pressure.



For More Information Circle Reader Service Number 564

TO PAGE 44

The all new MIROFAST SUPPORT

4 ft. and 5 ft. lengths. Prices on request.

✓ STYLED for appearance
✓ TWO-TONED for versatility
✓ COMPLETELY ASSEMBLED for efficiency
✓ ENGINEERED for strength
✓ INDIVIDUALLY WRAPPED

Write Dept. FDM

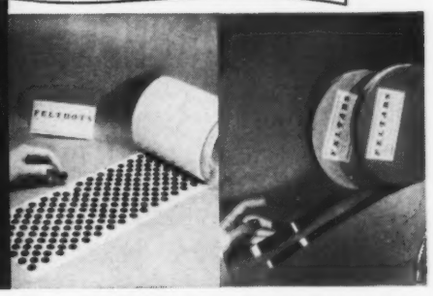
MOHAWK Furniture Finishing Products Inc.

175 W. Main St. Amsterdam, N. Y. | 88-05 101st Ave. Ozone Park, NYC, N. Y. | 3809 Burbank Blvd. Burbank, Calif.

FOR DATA CIRCLE FDM NO. 1401

SELF-STICKING FELT

FELT TAPE TABS DOTS



JUST PEEL OFF...PRESS ON...THAT'S ALL!

NO GLUE...NO HEAT!

CUSHIONS
SILENCES
SEPARATES
SEALS
DUSTPROOFS
INSULATES
PROTECTS

Speed up production, cut costs, improve appearance, and performance with FELTAPE, FELTDOTS, FELTABS on panels, lids, bases, clamps and other contact areas. Seals out dirt, noise, stops vibration, rattle, reduces breakage, absorbs shocks. Pressure sensitive adhesive back sticks by contact to any surface, smooth, rough, flat or round. Conforms to any shape. Available 1/8" thick, gray, brown, taupe or white. Moth and vermin proof in gray, taupe and brown only. Available 3/64" thick, beige, black, green, brown, gray or white. Moth proofed in brown only. Tape or tabs 1/8" to 2" wide, dots and washers 1/4" to 3/4" diameter. Special shapes, sizes, colors made to order. Write for samples, prices.

J. B. DAWN PRODUCTS
3905 W. 64TH PLACE • CHICAGO 29, ILL.

FOR DATA CIRCLE FDM NO. 1378

NEW STYLE 34 SWIV-L-GLIDE

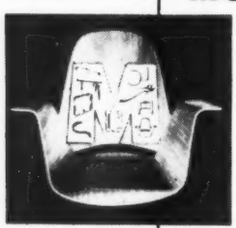
- Newly designed plastic base.
- Special high luster finish.
- Extra value at low cost.
- State quantity and size.
- Samples on request.

Arrowhead Associates

383 E. MAIN ST., MERIDEN, CONN.

FOR DATA CIRCLE FDM NO. 1366

MOULDED PLYWOOD?



For all the unusual shapes, including fancy veneers, see Arthur Marburg, America's largest source for the furniture industry.

- CANE • FURNITURE PARTS
- GLASS & MIRRORS
- LEGS AND TURNINGS
- WOOD CARVINGS AND PARTS
- PLYWOOD AND VENEERS

ARTHUR MARBURG

DIMENSION LUMBER CO.

409 5th AVE., N. Y. 17, N. Y. • MU 2-2492

FOR DATA CIRCLE FDM NO. 1396

Write for FREE Sample Book of our CAMBRICS

the only guaranteed sulphur fast black cambric on the market.

This fabric has been dyed by a special process Sulphur

FAST BLACK

the finest BLACK money can buy

FULLY GUARANTEED

COLOR FAST TO
- cleaning
- washing
- perspiration

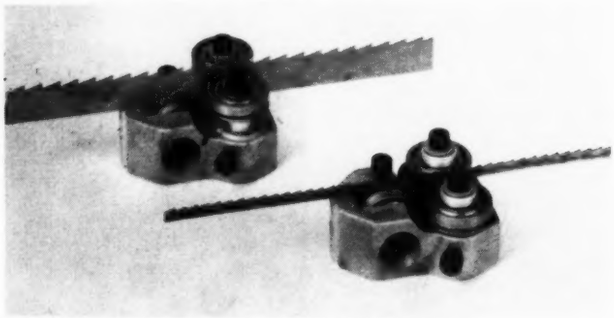
PROOF AGAINST
- smudging
- bleeding
- crocking

Sold only through better converters everywhere

Product of THE HARODITE FINISHING CO., INC.

North Dighton, Mass. • VAndyke 4-6961

FOR DATA CIRCLE FDM NO. 1389



Miniature Saw Guides

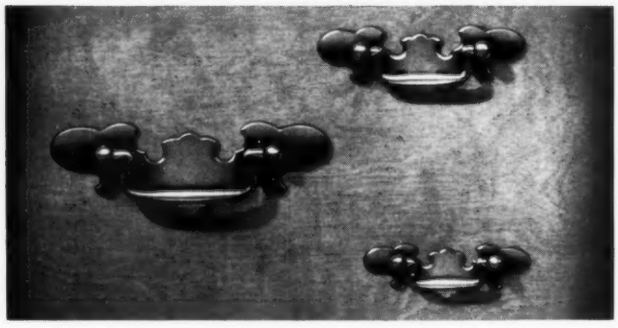
A line of miniature band saw guides for use on 14, 16, 18 and 20-in. machines, or for light and medium work on larger machines, has been announced by Carter Products Co., Inc. The units, called Guidall, Jr., feature ball bearing support and thrust rollers, specially constructed and sealed for accurate performance and long life under maximum load conditions.

For More Information Circle Reader Service Number 565

Woven Glass Fiber Roving

Woven glass fiber roving, made of random spun glass fibers, has been introduced by Sackner Products, Inc. According to the manufacturer, the roving wets out faster and more completely and allows substantial time savings in the fabrication of moulded fiberglass. It is available in various thicknesses, with strengths comparable to conventional woven material.

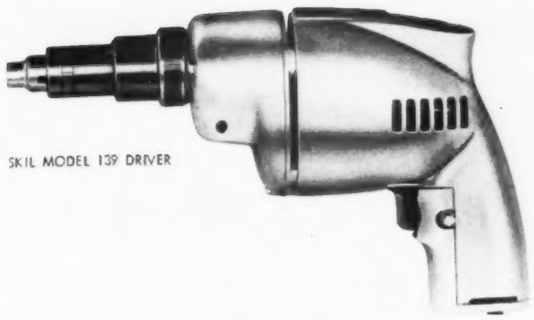
For More Information Circle Reader Service Number 566



Early American Pulls

Two smaller, companion pulls for bedroom, dining room, and other furniture have been added to its early American line by National Lock Co. They are available in antique English finish and are sized for 2, 2½, and 3½-in. centers. The pulls have wrought steel backplate and ball and are suitable for Georgian, colonial or other early American decor.

For More Information Circle Reader Service Number 567

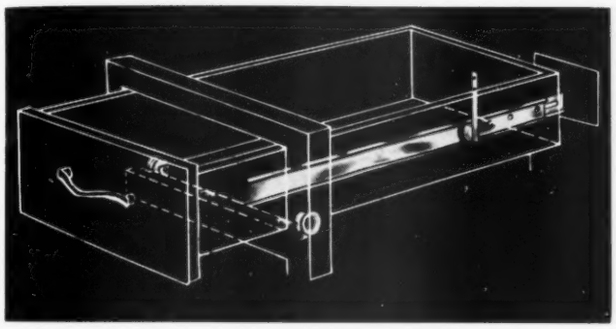


SKIL MODEL 139 DRIVER

Positive Clutch Driver

A positive clutch driver, built for light to heavy production use, is announced by Skil Corp. The model has trigger switch, pin for locking in "on" position, die cast aluminum housing, quick change finder ball thrust and sleeve bearings. The unit has capacity for No. 10 wood and self-tapping screws and No. 12 machine screws and nuts.

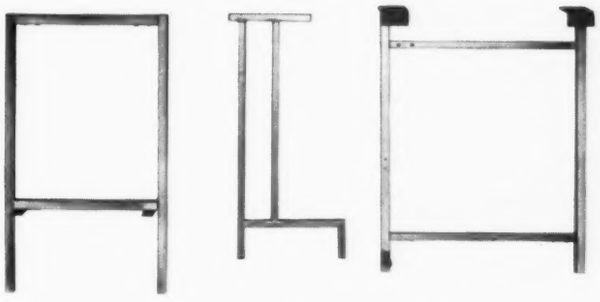
For More Information Circle Reader Service Number 568



Single Rail Drawer Slide

An easy riding drawer slide, featuring three eight in. rollers with bevelled flanges to prevent side binding, is available from Penn-Akron Corp. The heavy duty plated track, in 17, 19 and 21-in. sizes, has full adjustment up to two in. The manufacturer reports the slide eliminates need for framing or cross-reinforcing and its overall simplified design allows rapid installation.

For More Information Circle Reader Service Number 569



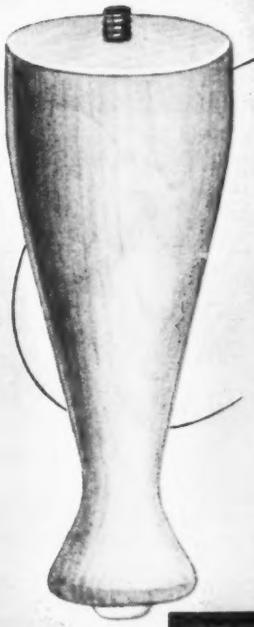
Finished Metal Frames

Metal frames in any shape or design, supplied with finishes that will not chip, stain or corrode, have been developed by Wilkenson Manufacturing Co. The frames are electroplated in satin or polished brass, chrome, pewter and coppertone and can be made with a combination of different size tubings. Small frames are one piece; larger frames have a knock-down construction.

For More Information Circle Reader Service Number 570

TO PAGE 46

add the beauty of
Genuine Hardwood Legs



manufactured to any specifications for
Furniture OF *Distinction*

A finishing touch of quality for the finest furniture! Legs especially created to accentuate the styling of your smartest lines... exactingly manufactured to your specifications. Write for samples in the finest hardwood to meet your quality requirements.

Send your Specifications for estimate, without obligation

IXL MANUFACTURING CO.
BERNIE, MISSOURI

"YOU NAME IT...IXL MAKES IT."

FOR DATA CIRCLE FDM NO. 1391

ANCHOR PLASTIC EXTRUSIONS to your specifications

NEW!

PLASTI-BRASS® PLASTI-KROME®
bright metal-like moldings

SHAPES, RODS, TUBES, FABRICATED PLASTIC EXTRUSIONS

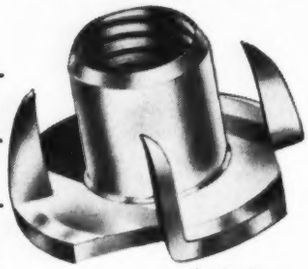
- No die charge on plain rods or tubes. Others usually $65.00—$200.00.
- 19 years precision custom work experience exclusively.
- 40,000 sq. ft. plant, own tool room & fabricating dept.
- Cutting service, drilling, punching & forming.
- Let us quote on your requirements. Ask for Brochure.

ANCHOR PLASTICS
Company, Inc.
36-36 36th St., Long Island City 6, N.Y. 212 RA 9-1494

FOR DATA CIRCLE FDM NO. 1365

SAVE WITH ACE KWIK-NUTS

TOP QUALITY
POSITIVE HOLDING
LOW PRICE



Captive Type

Torque prongs are full length and integral part of Kwik-Nuts. Available in 3-prong and 4-prong types with full threaded entry for five bolt sizes. For samples, specifications and prices send for Engineering Bulletin 508 A.

Ace Kwik-Nuts also available without torque prongs in Allen-Spanner type.

ACE ENGINEERING CO.
3901-B GRAND AVENUE
OAKLAND 10, CALIFORNIA

FOR DATA CIRCLE FDM NO. 1363

Brass Ferrules

HIGH STYLED & PRODUCTION
SWIVELS – FLARED – ETC.

STEVEN PRODUCTS CO.
Division of Glomar Industries
184 Casper Street, Valley Stream L.I., N.Y.

Manufacturers of Furniture Ferrules

FOR DATA CIRCLE FDM NO. 1411

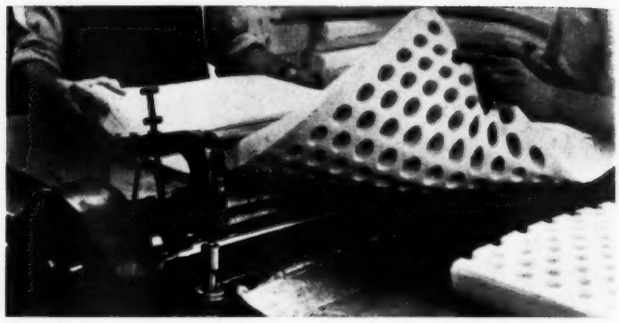
COLORFUL ~ Lusterchrome® POSTCARDS ATTRACT THE EYE

"Your furniture sells and moves buyers to buy when shown in full Natural Color Postcards, also as a retail sales aid. *Write for samples and prices.*"

Advertise your products
WITH POSTCARDS
in FULL NATURAL COLOR

TICHNOR BROS., INC. 1249 BOYLSTON ST. BOSTON 15, MASS.

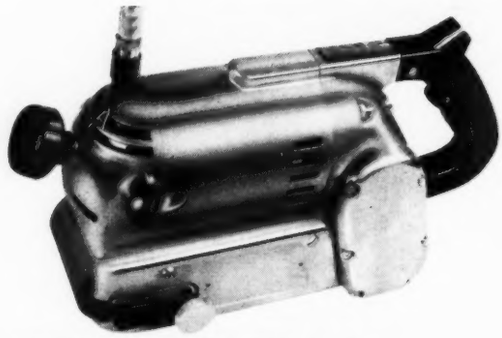
FOR DATA CIRCLE FDM NO. 1413



Adhesive Bonds All Foams

A new adhesive, Rubbafoam, said to bond with a seam as soft as the foam itself, has been developed by Rubba, Inc. The adhesive is claimed to apply easily by brush or machine, dry rapidly, leaving no depression and an almost invisible glue line. It will adhere foam rubber, polyurethane, vinyl and polyether foams to themselves, each other, and to other porous materials.

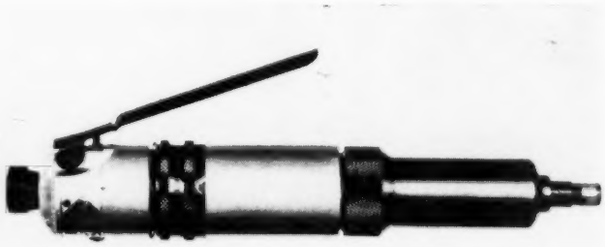
For More Information Circle Reader Service Number 571



Portable Belt Sander

A portable belt sander equipped with burnout-proof air motor, for finishing flat surfaces under continuous duty conditions, is announced by Buckeye Tools Corp. The 61E-738A sander will withstand abnormal abuse without danger of shock or motor burnout, states the manufacturer. The model has a 1.5 h.p. governed air motor that delivers and maintains a belt speed of 1120 sq. ft. per minute under load.

For More Information Circle Reader Service Number 572



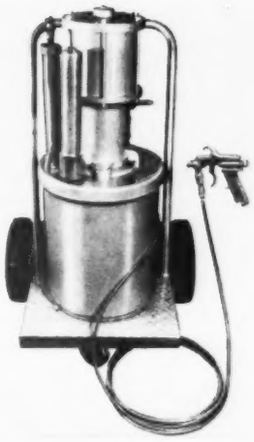
Automatic Torque Limiter

An automatic air-powered torque limiter, said to give absolute torque accuracy, has been announced by Master Power Corporation. The tool has pre-set fastener control which releases instantly when predetermined torque is reached. It has a torque range from 2 in. lbs. to 85 in. lbs. The unit is interchangeable with both lever and pistol grip models.

For More Information Circle Reader Service Number 573

Airless Spray System

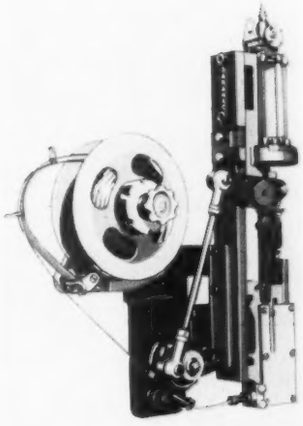
A HydraAirless 30 system for airless spray painting is offered by the Spee-Flo Co. The system features the new Atlas II pump, a high pressure reciprocating pump designed expressly for airless spraying, allowing 40 per cent greater volume and handling up to four manual or automatic guns, the firm reports. Operating pressures to 300 p.s.i are available. The unit comes in 10 and 55 gal. sizes.



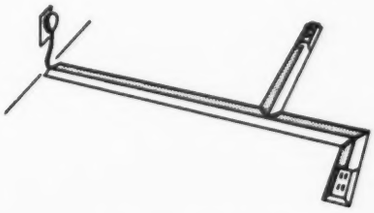
For More Information Circle Reader Service Number 574

Air Driven Stapling Head

A self-contained air driven PD stapling head suitable for independent mounting on a base or frame anywhere in the plant, has been announced by Saranac Machine Co. The head cuts, forms and drives its own staples direct from coils of standard wire. Driven by a pneumatic cylinder, it can be mounted vertically or horizontally and fitted to produce staples from ¼ to 1 in. maximum width or ⅜ to 1½ in. staple leg length.



For More Information Circle Reader Service Number 575



Floor Outlet System

A complete, over-the-floor custom electriduct system, prefabricated to specifications, is available from Ideas, Inc. The system comes completely pre-wired with all joints vulcanized, ready to place on the floor and plug into outlet. The electriduct is molded from black, slip-proof rubber or painted to harmonize with surroundings. The system comes in standard and special lengths.

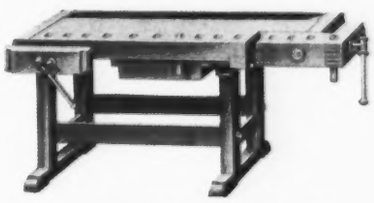
For More Information Circle Reader Service Number 576

SINCE 1872
Imported
Quality CANE Webbing

Beauty and grace of cane – assets to modern and traditional design. Your inquiry is invited for samples and prices of the wide variety of patterns available.

THE OTTO GERDAU CO.
Import-Export Established 1872
82 Wall Street, New York 5, N. Y., WHitehall 3-6200
ENGLAND • FRANCE • HONG KONG • INDIA • GERMANY • JAPAN • DENMARK

FOR DATA CIRCLE FDM NO. 1385

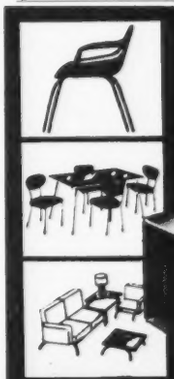


Heavy Duty Cabinetmakers benches
79" long with 2 vises and drawer.

WRITE FOR CATALOGUE

WOODWORKERS' TOOL WORKS
224 S. JEFFERSON ST.
CHICAGO 6, ILLINOIS • RA 6-8702

FOR DATA CIRCLE FDM NO. 1423



Specified by America's leading furniture manufacturers....

BERGER
WELDED STEEL
TUBING

DINETTE SETS • CHAIRS & TABLES • BEDS & DESKS • OUTDOOR FURN.

For increased production at reduced costs—specify Berger tubing. Size range: Round ¼" O.D. to 4" O.D. Square ½" O.D. to 3" O.D. A wide variety of shapes to meet your design needs. Special shapes to order. TAPERED ENDS OUR SPECIALITY! Beading, flaring, swaging and end forming in hot rolled, cold rolled or brite finishes.

For FREE Tubing Booklet and Sample, Write

BERGER TUBE CORP.
74-16 Grand Avenue (Maspeth, N.Y.C.) N.Y.
DEfender 5-8000

FOR DATA CIRCLE FDM NO. 1369

NEW LITERATURE

BORING MACHINES, including the newest developments in the design of boring machinery from B. M. Root Co., are presented in a bulletin containing up-to-the-minute photos and latest technical data representative of the complete line of Root Boring Machines.

For More Information Circle Reader Service Number 577

STRAIGHT-LINE CUT-OFF SAW, the No. 606 Bee-Liner, is described in a bulletin from Ekstrom, Carlson & Co. The machine has automatic cycling, wtih 60 short ram strokes to 20 long ram strokes per minute. The light weight, air operated head rides on precision ball bearing races, assuring smooth, accurate and easy operation.

For More Information Circle Reader Service Number 578

BANC-LOK self-locking inserts and tapped holes are described in an 8-page catalog from The Boots Corporation. The inserts are designed to provide screw threads with locking action wherever conventional tapping is difficult, inefficient or costly and are available in three basic designs: tapped hole, knurled and finned.

For More Information Circle Reader Service Number 579

URETHANE FOAM PRODUCTION is covered in an 8-page booklet offered by Isocyanate Products, Inc. The booklet covers materials, equipment, design and engineering know-how to use flexible and rigid foam-in-place designs.

For More Information Circle Reader Service Number 580

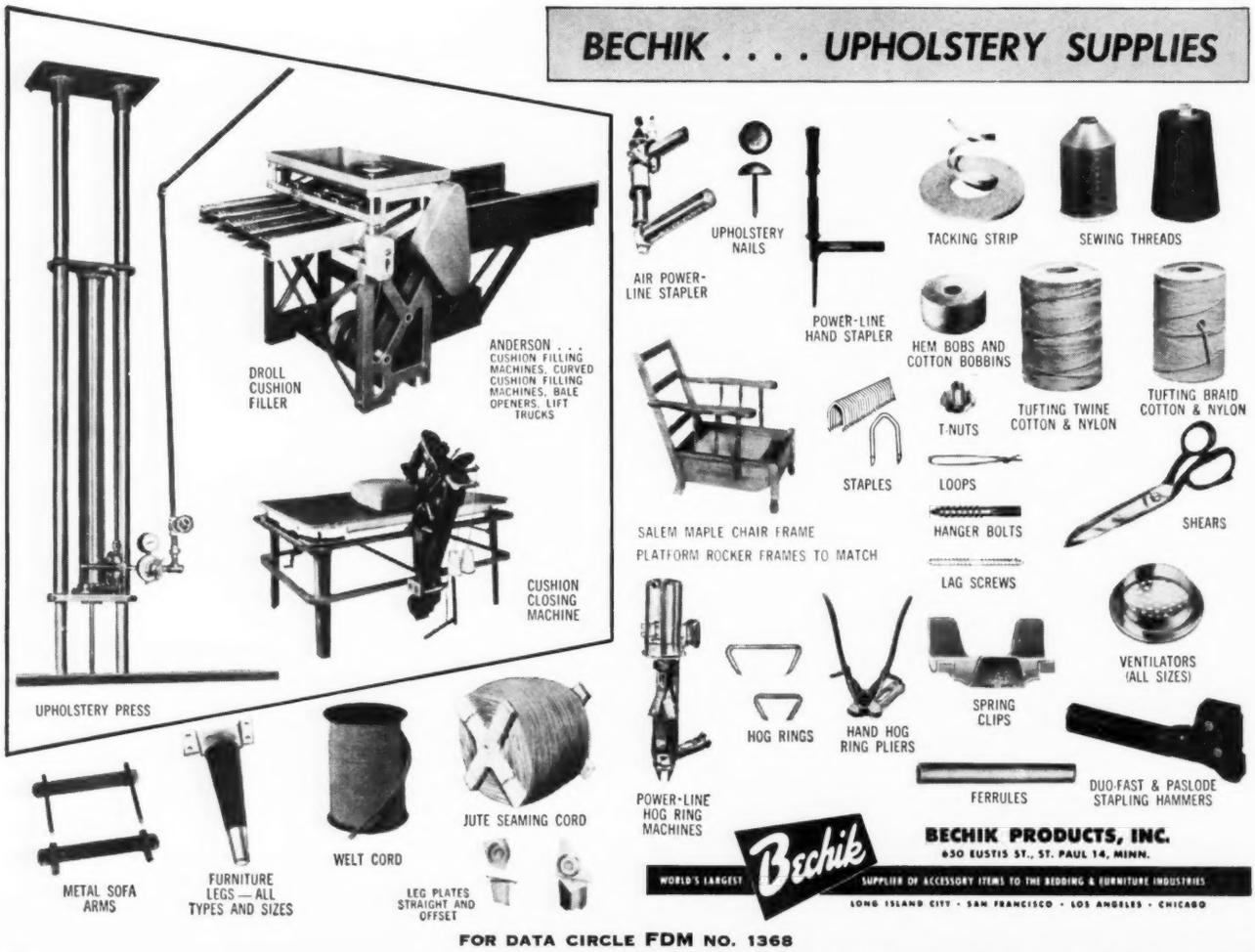
81 POWER TOOLS, including saws, drills, routers, planes, sanders, shears, drivers and others, are contained in a catalog available from the Skil Corporation. Photos and specifications of all tools, including the recently introduced recipro saw and new roto-hammers are contained in the 8-page, two-color catalog.

For More Information Circle Reader Service Number 581

VENTIFOAM LATEX RUBBER FOAM, and its advantages over conventionally molded furniture cushion units is explained in a leaflet, Form 228, from B. F. Goodrich Sponge Products. Also included are size specifications for Ventifoam and crowned Ventifoam.

For More Information Circle Reader Service Number 582

BRUSH-BACKED POLISHING HEADS, for sanding, polishing, deburring and other finishing operations are included in a product bulletin released by Grinding & Polishing Machinery Corp. The bulletin outlines some of the



FOR DATA CIRCLE FDM NO. 1368

applications of the 12, 16 and 32 brush heads, available in 9 models from 3 diameters. Also described are standard and special machines for mounting the heads.

For More Information Circle Reader Service Number 583

NATURAL CANE WEAVE and its uses and applications are explained in a brochure from Commonwealth Manufacturing Co. The cane is said to offer light, airy, lacy appearance, with textured variety for incorporation in modern design. The cane is offered in natural light color and delicately shaded tones.

For More Information Circle Reader Service Number 584

DAPONITE LAMINATING GUIDE, designed to give furniture and panelboard manufacturers a working knowledge of the requirements for an efficient Daponite laminating operation, has been released by the Dapon department of Food Machinery and Chemical Corp. The guide recommends materials, equipment and production techniques.

For More Information Circle Reader Service Number 585

WHERE TO USE PERMACEL PRODUCTS is the title of a 121-page booklet from Permacel, manufacturer of pressure-sensitive tapes and adhesives. The booklet lists products for specific applications, including pressure-sensitive tapes, adhesives, sealants, and coatings.

For More Information Circle Reader Service Number 586

WOODWORKING MACHINERY for furniture and cabinet manufacturers is illustrated in a bulletin from Danckaert Woodworking Machinery Co. The 56-page booklet contains descriptions, specifications and illustrations of a wide variety of equipment, including automatic shapers, wide belt sanders, pneumatic belt sander, straight line edger and multiple saws.

For More Information Circle Reader Service Number 587

ALUMINUM EXTRUSIONS in a variety of shapes and sizes are listed in a brochure issued by Harvey Aluminum. Rods, bars, tubes and other structural shapes are described, as well as hand forgings, press forgings, and impact extrusions.

For More Information Circle Reader Service Number 588

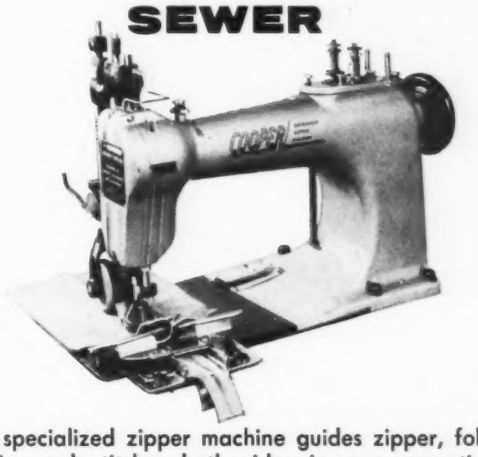
URETHANE COATINGS FOR WOOD is the subject of a 4-page technical bulletin from B.B. Chemical Co., which describes two resin systems offered as clear coatings for producing highly durable finishes that enhance the beauty and character of wood. Techniques for using the finishes are included.

For More Information Circle Reader Service Number 589

TILTING ARBOR CIRCULAR SAW, a 14-inch variety type, is explained and illustrated in a two-color bulletin from Delta Power Tool Div., Rockwell Mfg. Co. Designed primarily for wood and plastic product manufacturers, the saw is said to offer heavy-duty capacity, five-inch depth of cut, massive ruggedness, positive accuracy and extra safety.

For More Information Circle Reader Service Number 590

AUTOMATIC ZIPPER SEWER



This specialized zipper machine guides zipper, folds fabric, and stitches both sides in one operation. Speeds up production and assures accurate, attractively sewn zippers. Can be used for foam or spring filled cushions. 3 to 4 times faster than conventional machines. Economical too.

Write for Circular

H. P. COOPER & COMPANY, INC.

Sewing Machine Specialists

635-37 South State Street

Chicago 5, Illinois WAbash 2-5355

FOR DATA CIRCLE FDM NO. 1377

SAMPLES ON REQUEST

a complete line of
MODERN and TRADITIONAL WEAVES

Rainbow Trading Company, Inc.

268 WATER STREET, NEW YORK 38 • COrtlandt 7-2939

FOR DATA CIRCLE FDM NO. 1407

"HANDY" Rubber Insulated Glide

The HANDY Line

Upholstery Nails
Glides, Chair and
Drawer, Rubber Insulated
Spring Clips, Pliers
Drawer Clips
Grommets
Tube Caps
Border Tubes
Swivel Glides
Mattress Handles
Tufting Tapes
Tufting Buttons
Enameled Buttons
Button Covering Molds and Machines
Felt Tack Bumpers
Hog Rings
Ventilators
E/K, B/W Clips
SS Clips for Stapling Guns

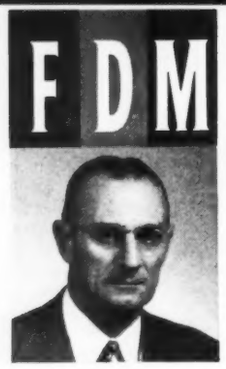
Handy Button Machine Co.

317 W. 37th Street, New York 18, N. Y.
2255 S. Rockwell St., Chicago 8, Ill.
1126D S. Los Angeles St., Los Angeles 15, Cal.

HANDY

SEND FOR OUR CATALOG

FOR DATA CIRCLE FDM NO. 1388



WOOD TECH
CARL A. RISHELL

Furniture Core Stock

Recently, in reviewing some of the furniture industry's practices in obtaining or producing core stock, I found some of them quite puzzling.

For example, there seems to be little uniformity in the industry with respect to the quality of the core stock used for similar products. Some plants require that a finished lumber core be free of open defects, while others permit rather large knot holes, sometimes as much as ⅜ inch.

An explanation of this diversity is not entirely in the quality of the furniture being produced. In the lower quality ranges, some firms prefer to use fairly good cores, while some go to the other extreme. There is more uniformity in the top quality brackets where the core must be good. Probably, it would be fair to rate the quality of furniture on the basis of the core stock used in it.

Another difficult thing to understand is the almost universal practice of buying lumber—all lumber—on the basis of price per thousand board feet. A few manufacturers claim that they get as much usable product from low grade lumber as from higher grades, even in the same species and from the same lumber manufacturer. There are only two explanations for this—either the furniture manufacturer is using a faulty accounting system, or he is willing to lower the quality of his core stock in order to utilize larger, more frequent defects.

It is not the purpose of this column to quarrel with the manufacturer of "economy" furniture. In this country, we have need of all brackets and, if a large open defect in the core of certain furniture is satisfactory for the use intended, then the practice is justified.

However, regardless of the quality of the product which he intends to make, the furniture manufacturer is not justified in buying his lumber on the basis of price alone, for this is no true indicator of yield. Nor is the grade labeling on the lumber necessarily a guarantee of yield for a specific finished product.

Although hardwood lumber grading is based on the number of allowable cuttings, the graded lumber may be suitable for a wide variety of uses, so the grade interpretation must be very broad. For example, certain species of lumber may have very small pin hole defects that lower its utility value for some purposes, hence carries a lower grade label. But, for other purposes, the pin holes have no adverse effect on the finished furniture product. Actually, the lumber may be—and often is—superior in other ways to that which has a higher grade label. This condition applies particularly to core stock, a product that usually requires long and relatively narrow cuttings, but which has to be free of large open defects.

The situation can be very complicated. The only solution is for the furniture manufacturer to maintain continuous and adequate quality control in conjunction with an efficient lumber accounting system. Setting up these facilities need not be expensive; in fact, it usually can be done with little or no added operating expense. But a department that will produce the required information will tax the ingenuity and time of management!

However, if a department to handle quality control and lumber accounting is to be set up and to function beneficially, management must reach one very important decision. The basis for the department must be that lumber will be purchased on its yield basis alone, and only after this has been determined will the price per thousand feet become a consideration.

This may be a bitter pill for the purchasing department to swallow, but the system will not work without complete cooperation between the quality control and purchasing departments. These two frequently have honest but opposing views of their objectives, so mutual understanding is necessary.

Without going into a detailed study of quality control, let's consider some of the qualities needed in a species of lumber to provide a satisfactory core material. A core stock's only purpose, with few exceptions, is to provide an adequate base for the faces of finished furniture panels, so it must be thick enough to provide stiffness and good profile appearance. As most furniture is covered with thin face veneers, open knots and other similar defects in the stock must be eliminated or controlled to prevent their showing through the face.

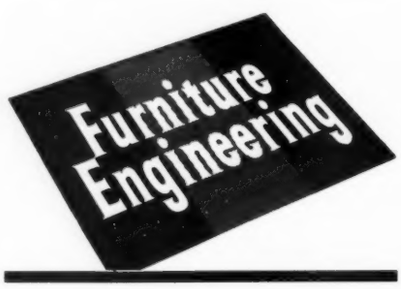
The wood for core stock must be relatively stable, i.e., resistant to shrinking and swelling. It should be of a non-resinous species so that resins and gums will not bleed through. Though it must be sufficiently hard to provide good screw holding, it should be no denser than is necessary for this purpose.

It should be a wood that machines smoothly, with a minimum grain raising after planing. Gluability, of course, is a required property, and either natural or built-in resistance to warping and twisting is essential. Also, since some cores will have exposed edges, good finishing properties may be a requirement.

Veneer cross bands, in general, are only for supplementing the properties of the solid core. While they are important for all lumber cores, they must never be considered as a "cure-all" for every defect in the lumber. Their function is to eliminate show-through from very minor defects and to reduce the effects of shrinking and swelling of the solid core stock. They will not hide large open defects, nor will they conceal shrunken glue lines.

The perfect lumber core would be

TO PAGE 60



A technical section for managers, department heads and technicians responsible for production, planning, cost analysis and research in the furniture, upholstery, and bedding industries.

FOR MORE INFORMATION

ON

EDITORIAL—IT'S NEW—ADVERTISED PRODUCTS,

Circle the numbers of the appropriate item or advertisement, tear out and mail this postage free card.

FDM—Reader Service Dept.

is at your service. Write us if you would like more information about any source of supply.

Please send me further information about the items circled below:

EDITORIAL ITEMS: O-150 O-151 O-152 O-153 O-154

IT'S NEW: (Materials, Supplies, Equipment, Components, New Literature)

553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568
569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584
585 586 587 588 589 590

FDM Numbers: (Advertisements)

1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375
1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388
1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401
1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414
1415 1416 1417 1418 1419 1420 1421 1422 1423 1424

NAME_____ TITLE_____

(Please Print or Type)

COMPANY_____

ADDRESS_____

CITY & STATE_____

ZONE NO.

OCTOBER 1960 • This card good until December 1, 1960

Postage Will Be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 17269, CHICAGO, ILLINOIS

FURNITURE DESIGN and MANUFACTURING
608 S. DEARBORN ST.
CHICAGO 5, ILLINOIS

FOR MORE INFORMATION

ON

EDITORIAL—IT'S NEW—
ADVERTISED PRODUCTS,

Circle the numbers of the appropriate item or advertisement, tear out and mail this postage free card.

FDM—Reader Service Dept.

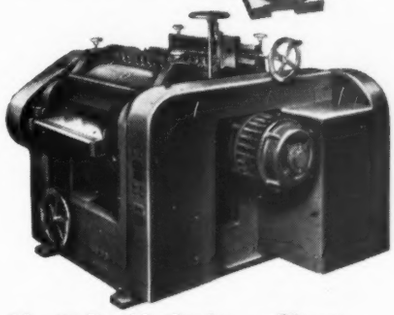
is at your service. Write us if you would like more information about any source of supply.

BUSS

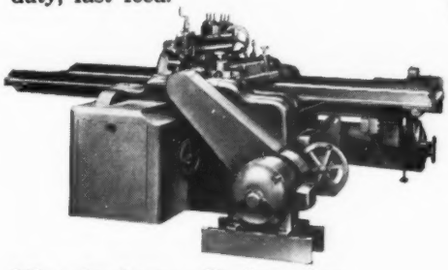
THE COMPLETE PLANER LINE

with profit-producing advantages

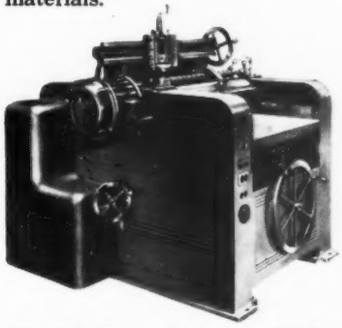
No. 44 Single Surfacer—4 roll
No. 66 Single Surfacer—6 roll



No. 55 Double Surfacer—Heavy duty, fast feed.



Micro-Surfacer — Single surface machine for planing thin, flexible materials.



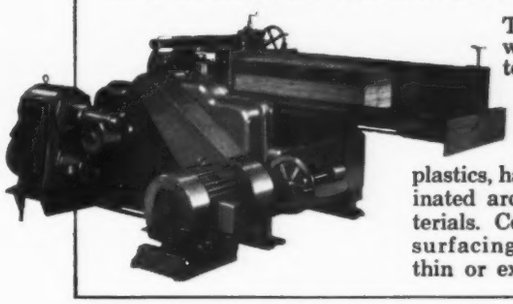
No. 4-L Single Surfacer—Wedge adjusted bed, 4 roll.

For nearly a century Buss has been known as the designer and producer of the world's most accurate and durable planers. A planer specialist, Buss devotes 100% of its time to the engineering and production of surfacing equipment. When you are looking for a planer, compare Buss with any make. We think you will decide on Buss . . . the planer with the profit-producing advantages. Let us send you literature on our complete line . . . six different models, forty different sizes.

Check these BUSS advantages

- ✓ Instantaneous Control For Parallel Setting Of Pressure Bar
- ✓ Patented Shearing Bar Prevents Damage To Cutterhead And Pressure Bar
- ✓ Micrometer Control Of Lower Rolls At The Turn Of A Dial
- ✓ Up To 1,000 Lbs. More Frame Weight For Rigid Support, Improved Performance, Longer Life

BUSS SPECIALIZED PRODUCTION SURFACING EQUIPMENT



Top Head Single Planer with chain drag hopper feed to four power rolls.

Buss has designed planers for rubber, vinyl, phenolic, acetate, plastics, hardboard, brake lining, laminated arches, and many other materials. Contact us about any special surfacing problems involving very thin or extremely thick materials.

BUSS MACHINE WORKS, INC.

A Subsidiary of Greenlee Bros. & Co.

234 EIGHTH STREET, HOLLAND, MICHIGAN

FOR DATA CIRCLE FDM NO. 1372

Wood Veneer Surfaces are now Freed from Danger of Cigarette Burns, Solvent Stains

and Abrasion Through

FINISHIELD

By Alfred De Bat, Associate Editor

Photograph by author

HARDWOOD researchers in a major scientific breakthrough have developed a unique process which guards natural wood surfaces against stains, solvents, abrasions and cigarette burns.

The Finishield system acts as a barrier to the majority of dangers to finishes found in the home, whether they be nail polish remover or 100-proof bourbon—and when used with quality wood veneers the total material costs are still lower than plastic laminate tops.

Finishield is based on two principles. First, a thin, dry aluminum foil, called Dri-Line, is bonded between veneer and crossband layers. The foil protects the veneer from cigarette burns by dissipating over a larger area the intense heat found at the burning tip. Second, the construction includes new polyester or epoxy finishes, which have great resistance to abrasion and solvents.

"Finishield represents the end of a long search. It will enable furniture manufacturers to offer their customers the depth and beauty of fine cabinet woods on all surfaces, instead of a printed imitation, and at the same time all of the wear and accident resistance claimed by plastics. It means no more fussing with applying plastic tops and banding and attempting to match the sides and legs of the product to it. All this—and a reduction in cost too," commented Howard Gatewood, executive vice president of the Fine Hardwoods Assn. Gatewood introduced the new material to the industry at the recent National Assn. of Furniture Manufacturers' convention in Chicago.

Finishield suppliers report that Finishield has the competitive edge when comparing material costs between it and high pressure plastic laminates. Comparing ¾ in. top costs on a square foot basis, the suppliers report that Finishield with an epoxy surface costs 59 cents per sq. ft., and 63 cents per sq. ft. with a polyster surface, while plastic laminates cost 85 cents per sq. ft. (See chart I for complete cost breakdown.)

But Finishield suppliers point out that this does not give the complete cost comparison picture. No attempt has been made to include labor costs in the production estimate, since methods and wage rates vary greatly through the United States.

The Finishield process does require more rubbing on tops than plastic. However, this is more than offset in most plants by the saving of labor involved in handling and adhering plastic tops, toning the sides of the case to match plastic tops and the additional work of applying plastic banding compared to veneer banding.

Currently, report Finishield researchers, tests are being conducted in brush rubbing and mechanical felt rubbing to reduce this expense.

If the furniture manufacturer purchases plywood rather than laying it up himself, it is estimated that Finishield ¾ in. plywood containing Dri-Line foil and with flat sliced walnut face will cost about 75 cents per sq. ft., plus a finishing cost of six cents per sq. ft. for epoxy, or 10 cents per sq. ft. for polyster. Plywood in ¾ in. thickness with plastic laminate surface costs about $1.25 per sq. ft., according to the researchers.

Finishield in a polyester finish is 26 per cent cheaper than plastic laminates, if the manufacturer is laying up his own plywood, or 32 per cent cheaper if he is not. With the epoxy finish, Finishield is 31 per cent cheaper than plastic with manufacturer lay ups, and 36 per cent cheaper if the producer is buying his plywood stocks, according to supplier figures.

The Dri-Line aluminum foil was created by Polymer Industries, Inc., Springdale, Conn., but the product is being manufactured and sold by Aluminum Co. of America, Pittsburgh, who is Polymer's licensee.

"Finishield may remind some people of Beautyguard," explained Gatewood, "Actually the only similarity is that both systems involve the use of aluminum foil under the face veneer."

Unlike previous foils, Dri-Line has an indefinite shelf life and is already coated with a thermosetting adhesive produced by Polymer, which requires only heat and pressure of a hot press to form a permanent bond. Dri-Line has been thoroughly tested in both an independent laboratory and in furniture and plywood plants. It has exceeded the shear test requirements of CS-35-56 commercial standards for interior plywood. (See chart II for specifications.)

No additional glue line is necessary to bond the aluminum to the hardwood. The Polymer Industries coating is the adhesive, and although it will produce good bonds under a wide range of temperature, pressure, moisture and time there is an "ideal" press condition. The best conditions are: 285°F at a press pressure of 140 p.s.i. Moisture content of the face veneers should be between six and 10 per cent, while crossbanding or corestock moisture should be between eight and 12 per cent. The minimum time should be two minutes, while there is no practical maximum time limit.

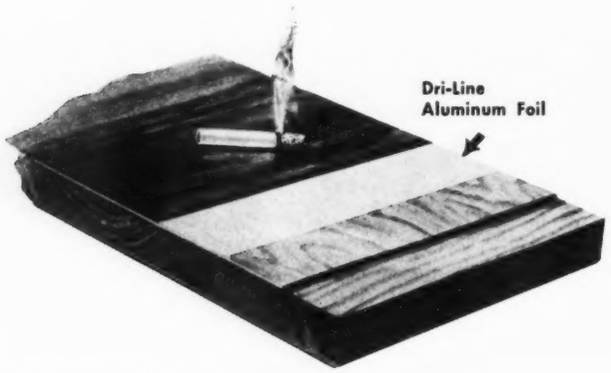
The resulting bond meets wood failure requirements of CS 35-56 commercial standards for plywood.

With the exception of moisture content, the variables may be *increased individually or collectively* without decreasing bond strength. Increased pressure, in fact, will materially increase bond strength.

If the ideal press conditions cannot be reached the following variations are allowable. If a maximum platen heat of only 225°F is available, a pressure of 100 p.s.i.

TO PAGE 54

CONSTRUCTION



CROSS SECTION of Finishield ply construction.

for 12 minutes or 150 p.s.i. for seven minutes will produce good bonds.

If only a maximum pressure of 50 p.s.i. is available, a temperature of 250°F for seven minutes will produce good bonds.

In both cases it is necessary for the moisture content to be in the correct range and preferably a little on the high side.

Dri-Line aluminum may be cold pressed using any conventional cold press adhesives. Inasmuch as the Dri-Line coating serves as a prime coat, the instructions of the adhesive manufacturer control its application.

Since Dri-Line serves as a heat dissipating layer under the veneer, the rate of dissipation increases with the thickness of the foil. A thickness of 2.5 mils is the minimum permissable under 1/28-in. veneer, assuming the face has been sanded before finishing to approximately 1/40-in. Heavier foil provides a faster rate of heat dissipation.

In five-ply construction it is awkward in some operations to spread only one side of the top crossband. The practical solution to this is to reduce the wet spread on one side by 30 per cent. Use this light spread against the foil and against the back veneer.

Whenever a barrier ply, such as the aluminum foil, is inserted in a multiple ply construction, the moisture balance becomes a very important factor. Even though the layup may be pressed at the safe conditions of time, temperature and pressure, the results can vary from an excellent bond to a spotty one, due to blows or to complete delamination at the aluminum face.

A blow indicates too much moisture and delamination indicates not enough. Using a full wet spread against the foil has caused occasional blows. Thousands of tops have been produced efficiently using the reduced spreads on the foil side. In the event of delamination due to overdry veneers, a light water spray on the veneer or wiping the foil with a damp sponge is an immediate corrective measure. The safe procedure is to have the veneers and core in the range of safe values at the start, recommend the foil manufacturers.

Warping can be avoided in unbalanced construction by understanding the nature of the Dri-Line coating and using correct press techniques. The bond between the aluminum and the veneers when removed hot from the press, although sound and workable, nevertheless is relatively flexible. This is desirable because as the panel cools, the aluminum is permitted to shrink without pulling the panel into a curve.

Once the panel has cooled to room temperature, the bond, although still flexible, is good and will not weaken even though the panel is reheated. The biggest source of trouble is the entrapment of excess moisture between the crossband and the foil, due to the movement of moisture from the panel to both platens.

This line, consequently, is the last to develop full strength. To help equalize this condition it is helpful to press panels with the foil side to the bottom platen. Upon removal from the press, they should be stacked with a couple of cover panels to prevent excessive drying in the panels at the top of the stack. Since the alumi-

TO PAGE 56

CHART NO. I

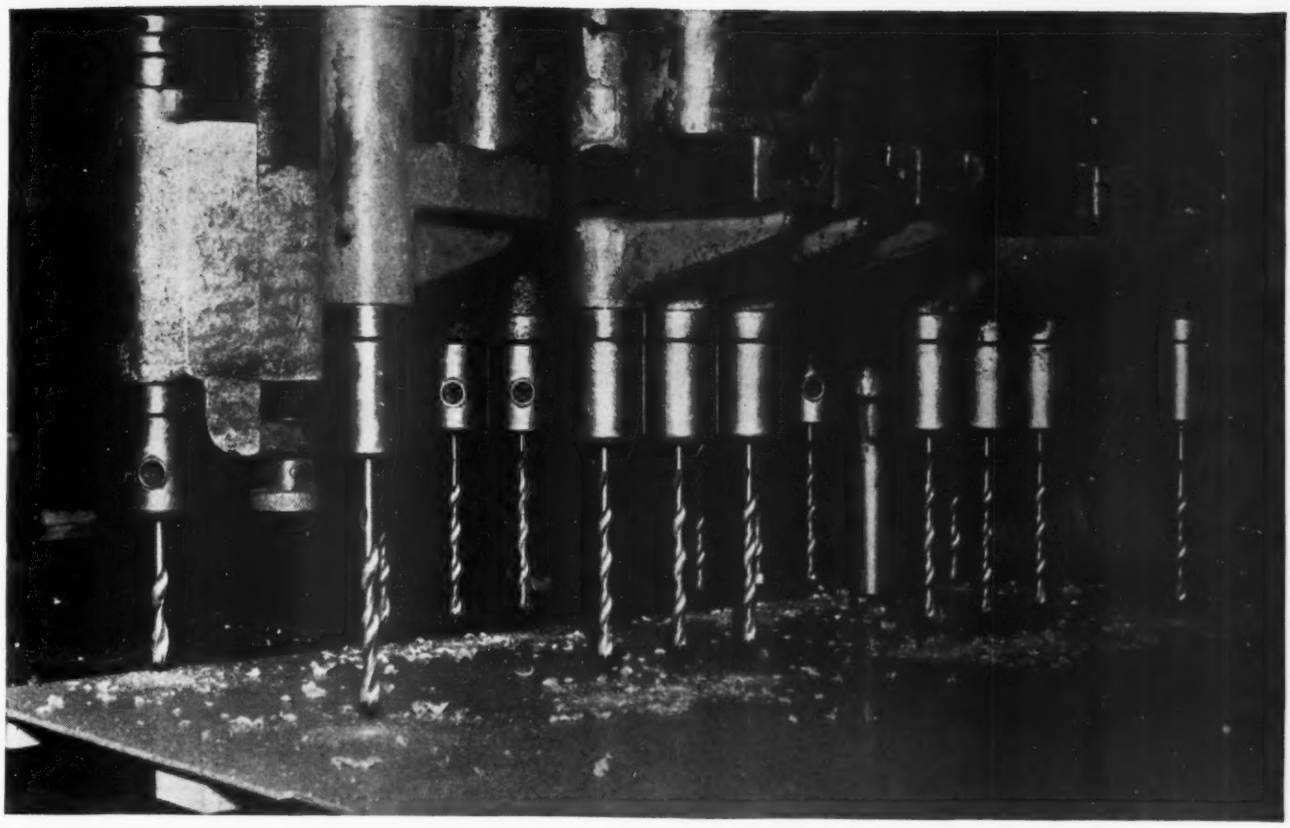
Material Cost Comparison
Finishield vs. High Pressure Plastic Laminates
3/4 in. Top per sq. ft.

	Finishield		Plastic
	Epoxy	Polyester	Laminate
7/16 in. Lumber Core	$ .27	$ .27	$ .27
2-1/16 in. Crossbands	.04	.04	.04
Backing	.02	.02	.10
Face	.12	.12	.42
Adhesive	.01	.01	.02
Aluminum Foil	.07	.07	—
Finishing Materials	.06	.10	—
Total Material Cost	$ .59	$ .63	$ .85
Material Savings per Foot	.26	.22	

CHART NO. II

Plywood shear test results
on furniture panels containing Dri-Line coated
aluminum foil under the face veneer.

Panel series	°F	P.S.I.	Time in Minutes	Average shear strength (P.S.I.)	Average wood failure %	Average wood adhesive failure %	Average aluminum coating failure %	Meets wood failure req. of CS 35-56
B, 1-3	225	100	6	160	58	..	42	Yes
B, 4-5	225	100	10	172	75	..	25	Yes
B, 6-7	225	100	15	225	92	..	8	Yes
C, 1-3	225	150	6	191	82	..	18	Yes
D, 1-3	250	50	6	196	78	..	22	Yes
E, 1-3	250	100	6	180	90	..	10	Yes
F, 1-3	250	150	6	220	94	..	16	Yes
G, 1-3	300	50	3	96	57	..	43	Yes
H, 1-3	300	100	3	254	83	5	12	Yes
I, 1-3	300	150	3	243	82	11	7	Yes
Cold, 1-3	Cold	150	16 hrs.	335	81	19	0	Yes



Greenlee Tools help Curtis Companies Incorporated increase production of kitchen cabinets

TOOLS FOR CRAFTSMEN
GREENLEE

Curtis utilizes a revolutionary new "U" shaped hardboard chassis in the manufacture of "Fashionwood" Kitchens. At their Sioux City, Iowa plant Greenlee Tools help keep production in high gear at all times. The photo above shows 16 Greenlee No. 177 Spur Machine Drills used in a Greenlee No. 386-C Gang Borer to bore holes for connecting hardware. These Greenlee drills last longer . . . keep down-time at a minimum. Their design permits continuous resharpening . . . for example, compare the lengths of the two drills at the extreme left. Get complete information on Greenlee Tools. Write for our latest brochure.

Begin with Greenlee tools . . .
they're better to begin with

WOODWORKING MACHINERY MANUFACTURERS' ASSOCIATION

GREENLEE TOOL CO.

Division of Greenlee Bros. & Co.
1861 HERBERT AVENUE
ROCKFORD, ILLINOIS

FOR DATA CIRCLE FDM NO. 1387

Machine Hypnosis Perils Careless Workers

"Machine hypnosis" can kill and injure workers. A danger similar to highway hypnosis each year has caused thousands of industrial accidents when men and women were lulled into careless actions by easy repetitive tasks, reported the Conveyor Equipment Manufacturers Assn.

As even the most attentive drivers are susceptible to highway hypnosis—the sense-dulling road menace—when they become too familiar with easy routine driving, industrial workers become accustom to the powerful machines that relieve them of exertion and also tend to become careless and unaware of potential peril.

"The man with a consistently good safety record knows that accidents have causes. He doesn't have to learn the hard way," an association spokesman said.

On the job workers are often lured into "machine hypnosis," by the smooth, easy rhythm of production and materials handling equipment. Conveyors are used more widely through the furniture industry than any other type of heavy equipment, yet less than one per cent of all accident compensation cases involve conveyor equipment.

One reason of this remarkable safety record is the educational program by conveyor manufacturers, reports the association. Conveyor safety rules for plant workers include:

- Use a conveyor only for its designed purpose. This especially means workers should not ride on any conveyor if it is not intended to carry them.
- Avoid loose clothing or accessories that may be caught in machinery or moving materials. Long neckties, open sleeves and open jackets are hazards for men. Long, loose hair, bracelets and beads can mean danger for women workers.
- Aisles should be as clear as possible at loading and unloading points. Spilled liquids, grease or powdered materials should be cleaned up immediately, lest someone slip and fall onto moving equipment.
- Even before employees begin work around a conveyor, they should find out where controls are located. And, they should not hesitate to use them when necessary. Stop motors before attempting to clear a choked conveyor.
- Workers further along the line should be considered. Materials must be loaded carefully so that they cannot fall off. Watch for corners and low clearance overhead, and don't overload.
- Foremen or maintenance men should be called for repairs. Workers shouldn't try to fix something that may be more complex and dangerous than they suspect.
- Machinery must be shut off when it is not attended. It is difficult to say who has the next unscheduled appointment with an accident. No horseplay or practical jokes can be allowed near moving machinery—these are the poorest excuses for an accident.

Familiarity with the plants mighty mechanical workmates can breed danger. But, worker familiarity with the machines' accepted rules for operation is the surest accident prevention. ■

FINISHIELD CONSTRUCTION

CONTINUED FROM PAGE 55

num blocks moisture evaporation through the face, uneven evaporation could cause cupping. Flatness can be restored by moistening the back veneer.

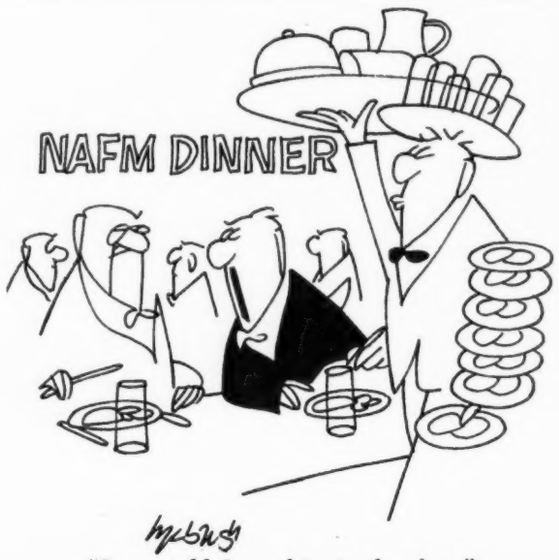
When using a dry adhesive system two things are of prime importance:

1. Surfaces must be in contact.
2. No voids or cavities can be allowed because dry systems cannot bridge them.

For maximum performance manufacturers must make sure:

- Veneers and cores are as smooth, free from voids and of uniform caliper as possible.
- Pressure should be as high as possible without causing physical or dimensional damage to the wood.
- The manufacturer's instructions for use of the dry system should be scrupulously followed.

Certain veneers, which present problems in conven-



"Boy, could I use him in the shop."

tional gluing techniques, also will present the same problems with Dri-Line. In cherry, oak and walnut, for example, moisture content should be on the high side of the ideal range. Cherry that has been allowed to become excessively dry, should be allowed to stand for several days after the moisture content has been corrected and before pressing.

Birch and maple veneers sometimes present a waxy resinous surface that tends to reject all gluing techniques. Wiping or spraying the surface with furfural alcohol, or in stubborn cases with Polymer Industries RL-82, should correct the difficulty.

"High frequency electronic bonding has also been proven as a satisfactory way to incorporating foil in a hardwood structure. Care should be taken that the foil does not come in contact with form faces. Adhesives formulated for this type of gluing should also be used only by following manufacturer's instructions," reported Herbert Austin, manager of Dri-Line Field Development, Polymer Industries.

Markedly different from previous foil systems, Dri-Line will not block under normal storage conditions or bond to itself even under moderate heat and pressure. Sheet stock may be safely stored in stacks.

Under normal conditions of temperature and humidity there is no reduction of reactivity due to time. Protection should be provided against steam, rain, wash water, dust and dirt.

A minimum dry thickness of 1.1 mils is necessary for hardwood bonds. Dryness is an important functional characteristic of the coated foil and should be checked upon receipt and before use.

There are three inspection methods to assure quality bonds with Dri-Line:

Visual Inspection—Color should be greenish yellow, yellow or gold. A white haze suggests possible water damage. A brownish gold to brown color suggests possible heat damage. The color of each side of the coated metal may not be identical. Users should check for large nicks, dents, cuts and creases. There is the possibility these will telegraph through the finished product surface. The foil should unroll easily with a slight amount of surface adhesion. A granular appearance or random "fish-eyes" are of no concern.

Coating Thickness Inspection—A thickness gauge or micrometer caliper will give adequate information on foil and coating thickness. In order to accurately test the gauge of the metal and the coating thickness, take a 2 in. strip across the width of the web and cut this into six equal lengths. Measure the thickness of each section. Then immerse a portion of each piece in concentrated nitric acid for one minute. This will strip the coating from the metal. Wash the acid off with water, dry and measure the thickness of the foil. The difference in the two measurements will give the coating thickness.

The specifications on aluminum foil allow a 10 per cent gauge variation, as does the coating specifications.

Water test—A test strip of coated foil should be placed in boiling water for 30 seconds. If the coating strips from the metal easily by scraping with one's fingernail or lightly with a knife blade, the manufacturer should be notified.

—Alfred De Bat

Next month—Finishield polyester and epoxy finishes and how to apply them.

NATCOLITE FURNITURE TOPS AND PANELS

FOR PREFINISHED DOORS, DRAWER FRONTS, ENDS

surfaced with
NEVAMAR
A HIGH PRESSURE LAMINATE
RESISTANT TO CIGARETTE BURNS
WITHSTANDS BOILING WATER
DESIGNED FOR LONG LIFE AND LASTING BEAUTY
WON'T CRAZE, CRACK OR PEEL IN NORMAL USE
NOT AFFECTED BY ALCOHOL, FRUIT ACIDS, AMMONIA ORDINARY INK . . . OR TIME
NEVER NEEDS PAINTING
EASY TO CLEAN
NEMA

CUT COSTS . . . SPEED PRODUCTION

- *Surfaced With Nevamar High-Pressure Plastic Laminates*
- *Any Size up to 4' x 8'—Any Thickness*
- *Self-Edge or Wynene Plastic Edge*
- *Choice of 75 Patterns and Colors*
- *Any Shape For Any Use*

You'll have an immediate solution to many production problems when you use Natcolite tops and panels. Surfaced with Nevamar high-pressure plastic laminates, in a wide range of wood-grains or colors, they come to you completely prefinished—no more matching or finishing of veneers. These balanced, warp-free tops and panels are produced in one of America's most complete fabricating plants, with facilities to give you the right top or panel for superior furniture at low cost. Write us with your requirements. We'll send samples to fit your needs.

THE NATCOLITE COMPANY

ODENTON, MARYLAND

FURNITURE TOPS • CASE GOODS TOPS • SCHOOL FURNITURE TOPS • FABRICATED PANELS

FOR DATA CIRCLE FDM NO. 1402

Jig Aids Sanding of Eight-sided Table

SPECIAL JIG with garnet abrasive belt rapidly sands difficult eight-sided cocktail table pedestal at Imperial Furniture Co. at Grand Rapids, Mich.

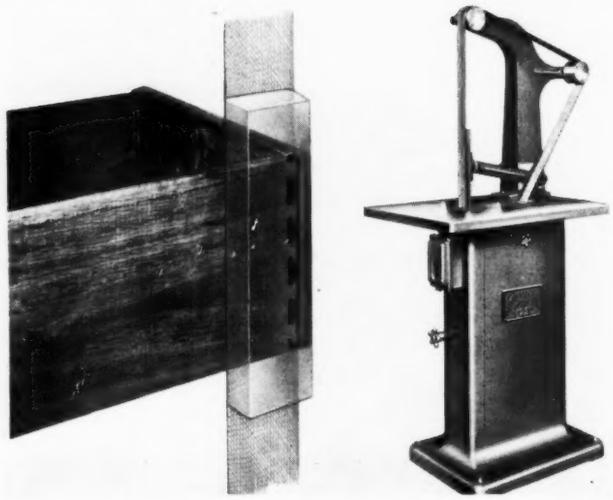
Production on a difficult to produce, eight-sided table was increased threefold by Imperial Furniture Co., Grand Rapids, Mich., with a coated abrasive belt and a special sanding room working fixture.

A jig which holds the gumwood base securely in position during the operation provides unhampered access to all eight sides and allows quick rotation of the workpiece for fast finishing.

The belt, specified by Behr-Manning Co., is 100-grit (2/0), closed coat garnet finish cloth of J weight, single-flexed, 5 in. wide, running at 2,500 surface feet per minute. It is pressed into the base by a formed block made on laminating maple and babbitt metal.

Once fitted to match the opposing contours of the octagonal base, the hand block maintains its shape permanently and provides a consistent, smooth sanding job. As the belt is run between the block and pedestal, the grooves and sides are polished with ease. ■

Dovetail Sanding Made Easy



NARROW BELT with backup plate allows sanding in right angle drawer corner to knock off dovetail extensions.

A difficult job with an ordinary belt or disc sander is sanding off the overextension of a dovetail joint on drawers that have the front extending beyond the draw slides.

Several wood working plants have solved this problem by using an Ekstrom, Carlson No. 123 Variety belt sander, according to the manufacturer. The narrow belt, together with its backup plate, allows the dovetail extension to be sanded smooth to the sharp corner.

The narrow No. 123 belt is well fitted to applications where it is necessary to sand sharp corners, reports Ekstrom, Carlson & Co. ■

FURNITURE DIMENSION STOCK

INDUSTRIAL WOOD PARTS

Ash-Beech-Cottonwood-Elm-Gum
Maple-Oak-Poplar-Arkansas Pine

★ ★ ★ ★

Semi or Fully Machined
Solid or Glued—Carloads only

Inquiries invited

FABRICATED LUMBER PRODUCTS COMPANY

Upper Montclair 8, N. J. *Pilgrim 4-2131*

FOR DATA CIRCLE FDM NO. 1380

A complete, easy-to-read guide for grinding all types of cutting blades, with information on angles, wood structures, etc. Written for the operator as well as the woodworking superintendent and foreman.

KNIFE GRINDING AND WOODWORKING MANUAL

by Charles G. Monnett, Jr.

Paper bound, 10 x 11 in. 167 pages—187 illustrations. $5.35 per copy, postpaid. Send check with order to: *Book Dept., Furn. Design & Mfg., 608 S. Dearborn St., Chicago 5, Ill.*

PRIVATE TRUCKING GUIDE

by John F. Bohman

A comprehensive guide to aid furniture companies in the establishment and operation of private truck fleets, giving valuable tips and advice on the economic aspects of private carrier operations. Paper bound, 39 pages. $7.30 per copy, postpaid. Send check with order to: *Book Dept., Furniture Design & Mfg., 608 S. Dearborn St., Chicago 5, Illinois.*

CONTINUED FROM PAGE 37

A NEW HOME FURNISHINGS MARKET is scheduled for Portland, Ore., July 9 to 12, 1961, in the city's new eight million dollar Memorial Coliseum. The market will be the first to be held in Portland in 20 years, according to *J. E. Honsinger*, president of the *Portland Home Furnishings Market*. More than 138,000 sq. ft. will be used for exhibit space.

NATIONAL RETAIL FURNITURE ASSN. announced the appointment of *David J. Thomas* to its executive staff, serving as director of the organization's education division, succeeding *Alfred M. Salasin*.

Customer Expansions & Personnel Changes

HOUSEHOLD FURNITURE CO., INC. has moved from 523 W. Broad St. to Price and Gastons St., Savannah, Ga. *Douglas A. Conner* is owner.

R. B. DAVIS FURNITURE STORE, Adamsburg, Pa., will open a new store comprising 17,000 sq. ft. of space. Upon completion, the Davis store in Manor, Pa., will be closed.

KIBLER FURNITURE CO., 206 E. Main St., Front Royal, Va., opened a new store with over 13,000 sq. ft. of space. *Otis Kibler* stated that the $100,000 store will add several new lines.

SCHEWEL FURNITURE STORE, Main and Craghead Sts., Danville, Va., opened its seventh chain store. The 25,000 sq. ft. store is managed by *Cecil McGlaughlin*. *Abe Schewel* is president of the firm which also operates stores in Lynchburg, Lexington, Altavista, Harrisonburg, Luray and Winchester.

PARKER FURNITURE, 10375 SW Beaverton-Hillsdale Highway, Beaverton, Oregon, recently opened its store, featuring a complete line of furniture products. The 15,000 sq. ft. store is owned by *Mr. and Mrs. Louis E. Parker*.

SMITH FURNITURE STORE, Richland Hills, Arlington, Texas, opened its second store in that area. *Stan Smith* is owner; *Lefty Kendrick* is manager.

DISCOUNT FURNITURE CO., specializing in all types of furniture and appliances, opened in Glasgow, Montana, in quarters formerly occupied by Dunn's Bowling Alley. Owners are *Gay Manning* and *Don Vancil*.

WRIGHT & DONOVAN, INC., is slated to open its new furniture store at 502 Kennedy St., N.W., Washington, D. C. Owners are *Les Wright* and *Al Donovan*.

HAVERTY FURNITURE CO., 711 Fannin St., Houston, Texas, will move to new quarters at 804 Capitol Ave., Houston. *W. H. Fenoglio* is vice president and general manager of the firm which has four other stores in the Houston area.

HOUSLEY-HANSEN FINE FURNITURE opened in the Preston Forest Shopping Center, Dallas, Texas. The store will feature traditional, French and Italian provincial and contemporary furnishings. Owners are *G. J. Housley* and *Owen Hansen*.

LAMINATED TOPS

Custom Built...

To specifications

Specializing in these styles:

- Self-Edge
- Hardwood Edge
- Drop-Leaf Edge
- Occasional Tops
- Plastic or Aluminum Edge

We specialize in manufacturing laminated table tops for institutional and household furniture regardless of shape, size or style. Our tops are made to specifications using brand-name laminates and offering a choice of over 1,000 patterns. These warp-proof tops come to you completely pre-finished and perfectly balanced.

Our low operational costs in making a quality product at competitive prices makes possible greater savings for you.

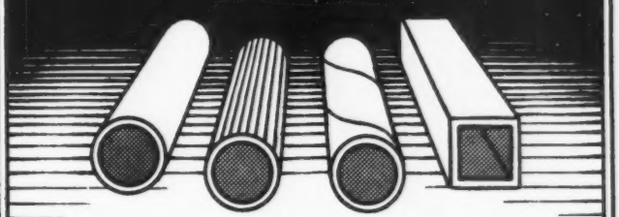
Call or write for quotations • Phone ME 4-7801

CLAPPER'S MANUFACTURING, Inc.
P. O. Box 8
Meyersdale, Pa.

FOR DATA CIRCLE FDM NO. 1375

a *new concept in* SOLID BRASS tubing...

...for YOUR industry



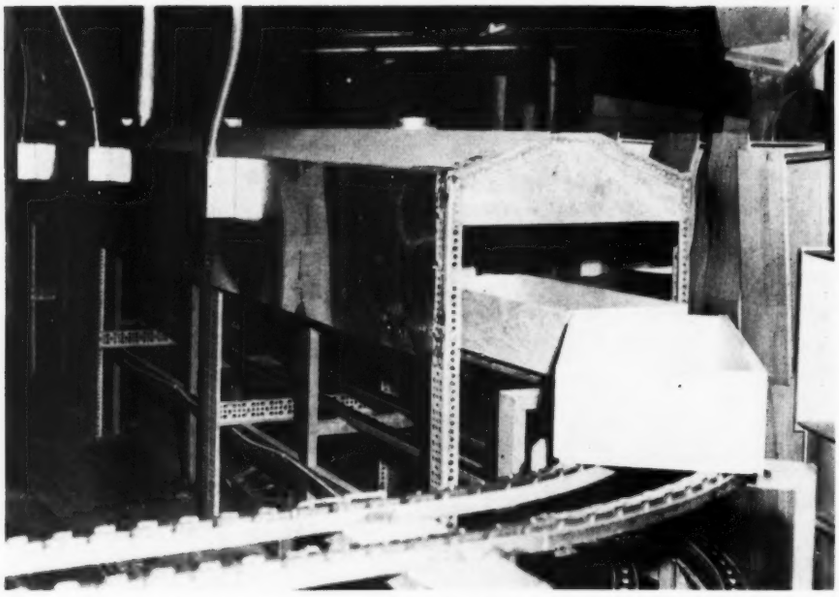
Our newly enlarged plant now stocks all standard sizes from 3/8" to 2" outside diameter in ROUND-REEDED-ROPE-SQUARE shapes. Check these other tremendous advantages:

- No Investment (we stock it for you)
- No Labor (our skilled technicians finish all work with advanced new automatic machinery)
- No Waste (any length, any quantity, any finish EXACTLY)
- No Time Loss (all work delivered within 1 week)
- Samples on request!

We can solve YOUR tubing problem!

AUTOMATIC TUBING CORP.
888 Lorimer St., B'klyn, New York • EVergreen 3-0100

FOR DATA CIRCLE FDM NO. 1424



INFRA-RED module ovens decrease drying time from 20 minutes to a minute and a half in wax coating process at Broyhill's Lenoir plant.

Infra-red Cuts Oven Time By 92% at Broyhill Plant

Infra-red drying units on an automatic drawer line have sharply reduced costs at Broyhill Furniture Factories in Lenoir, N.C. Drying time has been cut 92.5 per cent, the company reported, with custom-built ovens using heat modules supplied by Infra-Red Systems, Inc., Riverdale, N.J.

"Previously, drying with hot air ovens took 20 minutes," said Jack M. Buss, head of planning and design, mechanical research department, at Broyhill. "This time has been cut to one and a half minutes in the new infra-red units. Drawers travel through 24-ft. infra-red oven to dry a wax coating applied inside and outside the drawer sides. Conveyor speeds vary up to 26 f.p.m.

The ovens consist of four 6-ft. sections of infra-red modules. Each has two horizontal panels, adjustable 20 degrees, which control the temperature requirements and direction of radiation. Modules are enclosed in aluminum-sided ovens, which reflect radiation to the drying piece.

The oven may be vented or unvented, and exhaust blowers may be installed to rid the atmosphere of excessive volatiles. In addition to rapid drying, infra-red systems are open to the air, unlike hot air ovens, which must be closed tightly to build up and retain drying heat. The open construction prevents danger of explosion of volatile coatings and finishes, the Infra-red Systems said.

At Broyhill, the line starts at the drawer clamps and continues on conveyor past the drawer sander into an automatic spray. After spraying with a special wax base coater and sealer, the drawers go through the oven.

The infra-red ovens provide uniform heat with high efficiency and low maintenance, Infra-red Systems said. Original cost of equipment is considerably less than other types of ovens, and temperature up to 1,500° F are safely maintained at the module face. Modules are practically indestructible and heat materials of all colors and finishes equally well. ■

one that is free of all open defect and stabilized to prevent shrinking and swelling. Since this is not economically practical, we must continue using cross banding. But, we also must consider it as auxiliary and try to reduce the need for its functions to the minimum, consistent with the quality of furniture to be made.

In recent years, the furniture industry has become exceptionally interested in foreign wood species for core stock, particularly in those from South America. The performance of these species has not proved up to expectations in many instances. The failures have been due, largely, to insufficient knowledge of the species on the part of the furniture manufacturer and the lumber producer.

The furniture manufacturer is responsible for many of the difficulties because he has not investigated the properties of the wood, adequately, before putting it into the production line. Too frequently, the attraction has been price rather than results from sound judgment based on expert opinion or test data.

A wood may look good and be relatively low in price, but these are no criteria of its properties for furniture core stock. It should be remembered that there are many domestic species that are economical and look good, but are unsuitable for core stock. The furniture manufacturer would not consider using them because he has reliable information on their properties—pro and con.

Investigations of new species will cost time and money, but it will be cheap insurance that may avoid thousands of dollars in damage suits and lost prestige. The furniture manufacturer will do well to consider that, for every new core stock species offered to him, there is a better than 50-50 chance it will be unsuitable.

None of this is to be construed to

TO PAGE 62

LYON RED BOOK *Published since 1876*

Nationally Recognized as the Medium for Credit Protection
Credit Reference Books
Salesmen's State Editions (Pocket Size)
Weekly Reports and Supplement

Credit Reports
Weekly Interchange of Trade Experience
Collections
A National Organization That Gives Justice to the Dealer and Protection to the Manufacturer

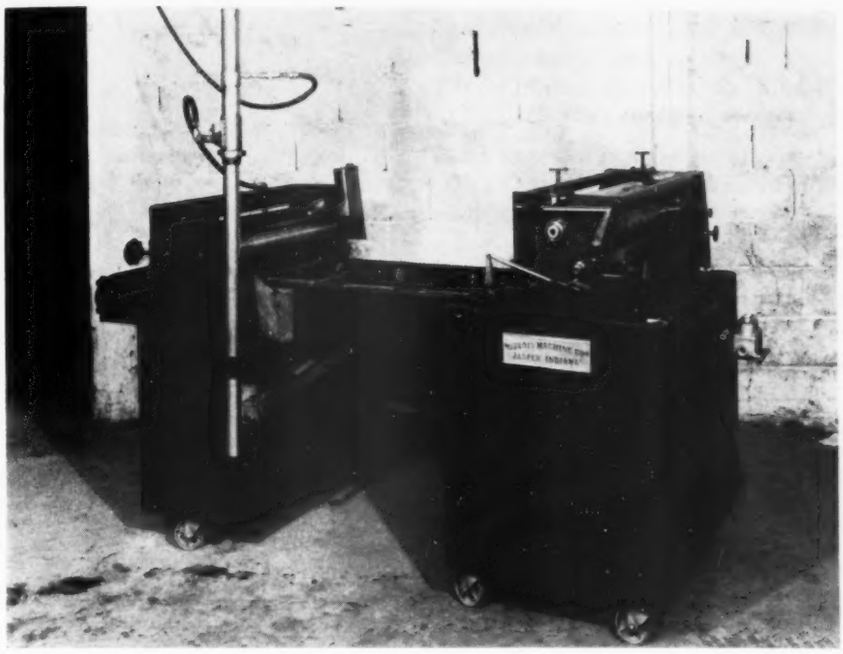
LYON FURNITURE MERCANTILE AGENCY
WILLIAM J. MILLER, General Manager

EXECUTIVE OFFICES
185 MADISON AVE., NEW YORK 16, N. Y.

Boston 14, Mass. Rm. 1112, No. Sta. Indust. Bldg.
Chicago 1, Ill.....221 N. LaSalle Street
Cincinnati 2, Ohio.....406 Elm Street
High Point, N. C.....401 S. Wrenn St.
Los Angeles 15, Cal.....1060 So. Broadway
Philadelphia 7, Pa.....12 South 12th Street

FOR DATA CIRCLE FDM NO. 1395

Finishing Machine Offers Fully Automatic Operation



PROTECTED FINISH is produced with the Dubois Model PS graining and sealer machine, which in one continuous operation applies sealer after inking to stock materials.

"The finishing operation is done in half the time," reported the United Manufacturing Co. after adding a Dubois combination graining machine and roller coater sealer at the company's Velpin, Ind. plant.

Although the machine, a Dubois Model PS, is not tied in with a conveyor line at United, it is designed to be used with a completely automatic finishing line, teaming up with base and finish coaters and drying ovens. The new machine has a variable speed drive. The sealer has automatic continuous recirculation of coating materials, and the overflow returns directly to the pump. Therefore there are no pans to clean. An adjustable solvent drip adds thinner to keep the coating material the proper consistency. The machine is built in two sizes: 26-in. printer and sealer, and 36-in. rolls.

The machine offers continuous operation with the sealer applied immediately after inking, which protects the grain effect and eliminates chances of marring. Both the grainer and roller coater are capable of handling materials up to 4 in. thick. ■

Build LIFETIME BEAUTY into your Wood Furniture...

Densiwood® is the name of an exclusive process that gives wood a diamond-hard finish (80% tougher than the untreated material) without affecting the rich natural warmth and grain of the wood itself. When you specify Densiwood in the furniture you build or design, such vital wear points as table legs and surfaces, chair arms and legs, moldings and center posts become virtually impervious to scuff marks, scratches, dents, and other signs of use. Designers have increasingly recognized the "hidden" benefits of the patented "Densiwood" process wherever wood is subject to wear and abuse. The beauty literally stays in for a lifetime!

Mail coupon now for complete details.

DENSIWOOD®

Lundstrom Laboratories, Inc.,
400 Smith St., Herkimer, New York

Please send information data on Densiwood.

Name.....

Company.....

Address.....

City & State.....

See our exhibit at Designer Displaycase, 1 Park Ave., N.Y.C.

FDM FUTURE DATES FOR MANAGERS

NATIONAL FOREST PRODUCTS WEEK	**October 16-22**
FALL FURNITURE MARKET **FALL SUMMER & CASUAL FURNITURE MARKET** American Furniture Mart Merchandise Mart Chicago, Illinois	**October 17-21**
FALL FURNITURE MARKET Exhibitors Building Waters Building Grand Rapids, Michigan	**October 17-21**
FALL FURNITURE MARKET Southern Furniture Exposition Bldg. High Point, North Carolina	**October 21-28**
AMERICAN SOCIETY OF INDUSTRIAL DESIGNERS 16th Annual Conference Edgewater Beach Hotel Chicago, Illinois	**October 27-28**
FOREST PRODUCTS RESEARCH SOCIETY MIDWEST SECTION MEETING U. S. Forest Products Laboratory Madison, Wisconsin	**October 27-28**
FALL FURNITURE MARKET Atlanta Merchandise Mart Atlanta, Georgia	**October 31-Nov. 2**
FALL SUMMER & CASUAL FURNITURE MARKET New York Furniture Exchange New York, New York	**October 31-Nov. 4**
FURNITURE MANUFACTURERS ASSN. OF CALIFORNIA 1960 Convention El Presidente Hotel Mexico City, Mexico	**November 3-13**
NATIONAL ASSN. OF BEDDING MANUFACTURERS 45th Annual Convention and Supplies Market Fountainbleau Hotel Miami Beach, Fla.	**November 27-30**
WINTER FURNITURE MARKET American Furniture Mart Chicago, Illinois	**January 6-14**
WINTER FURNITURE MARKET Los Angeles Home Furnishings Mart Los Angeles, California	**January 15-20**
WINTER FURNITURE MARKET Southern Furniture Exposition Bldg. High Point, North Carolina	**January 16-20**
WINTER HOMEFURNISHINGS MARKET Dallas Homefurnishings Mart Dallas Trade Mart & Market Hall Dallas, Texas	**January 16-20**
WINTER FURNITURE MARKET Western Merchandise Mart San Francisco 3, California	**January 22-27**

WOOD TECH

FROM PAGE 60

mean that there are not many South American species having the necessary properties for good core stock. The furniture industry is to be congratulated on its openmindedness toward and interest in these species, but not for the way it has gone about making its investigations.

The producers and sellers of South American lumber also have a responsibility for the failures. Most of them have even less knowledge of the properties of the wood being offered than do the furniture manufacturers who buy it. Usually, if the species has a reddish color and even remotely resembles mahogany in general appearance, it is promoted as being just as, or almost as good. More often than not, these are honest expressions of opinion. After all, they reason, the wood grows in South America and looks like mahogany; it is used in South America, often for furniture; so why should it not be suitable in the United States?

Actually, very little core stock is made or used in South America. Even for solid wood furniture, the manufacturing process is so different that there is no comparison. Any species of wood can be handmade into a usable and often desirable piece of furniture—but to put it into factory production is "a horse of another color." Also, remember that, in the United States, the Federal Trade Commission is a bit touchy about the use of nomenclature by the domestic trade. So, there may be marketing difficulties added to technical ones.

It seems to me that some of the manufacturers and sellers of these newly introduced furniture woods, start by shipping carefully chosen material for the introductory offer, lumber that is well graded and manufactured to the best of their abilities. But, as repeat shipments are made, quality standards fall off. This criticism does not apply in all cases; it probably is natural that products on trial are given closer attention than are others for which markets have been established—a condition which applies in any country.

Nevertheless, the furniture manufacturer should realize that the South American lumber industry is not on a par with that in this country, and that there is more chance of retrogression in quality.

This is not intended to discourage investigation of new species, but rather to warn the furniture manufacturer that, in buying the foreign species, he should deal with only the most reputable firms . . . firms not only reputable, but which also know the species and have some control over the manufacturing procedures of their South American suppliers.

The subject of furniture core stock would be incomplete without a mention of particle board. Solid lumber core stock will be used in considerable quantities for years to come. It will always be used, to a limited extent, for some furniture items and by some manufacturers. But generally, in my opinion, economics are far too favorable for particle board to permit solid lumber cores to dominate the market or even offer serious competition. For very good reasons, our furniture industry has been slow in switching over; the trend is gradual, but continuous.

The key is in providing the furniture manufacturer with enough assurance that particle board can be used without cross banding, which is being done and gradually accepted. Cross banding was as necessary for the older types of particle boards as it is for lumber cores. But the newer boards, designed for use without cross banding, leave no question that the goal has been achieved. There is no uncertainty in Europe. Germany, in particular, has practically eliminated cross banding, and the quality of their furniture, apparently, is on a par with ours.

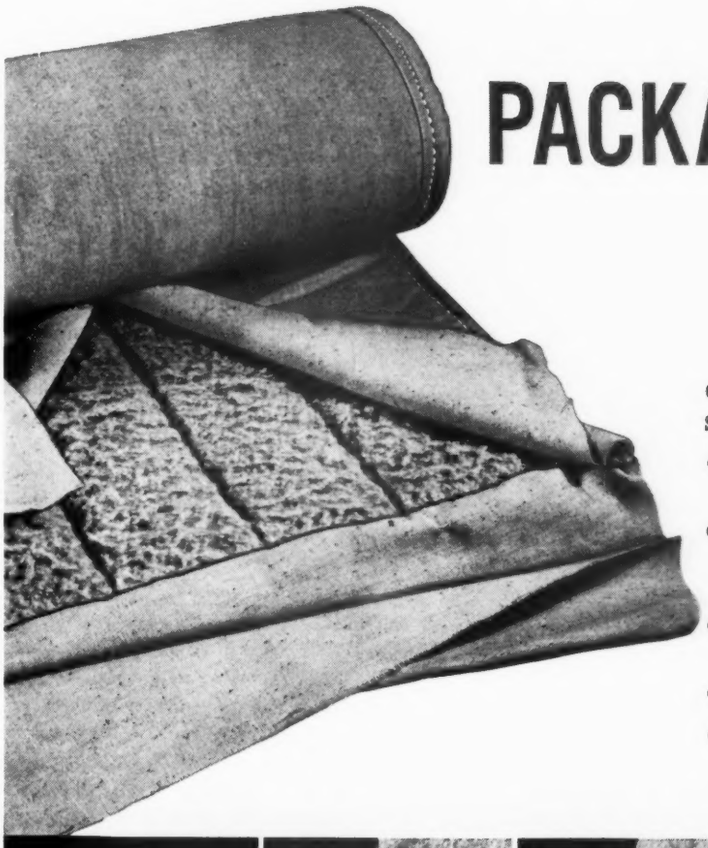
America's furniture industry has not been entirely openminded in evaluating particle board, but this is natural for any new product—it must have all the good properties of the old product, and none of the bad ones. It must be the perfect material, must sell for less than the older one and handled similarly, and is not permitted the occasional defect that is taken as a matter of course in the more familiar product.

However, economics will always be the deciding factor when quality and use are about the same. It is logical to predict that, within the next five years, particle boards of unusually high quality will dominate the American market, and new furniture designs will be perfected especially for using them.—*Carl A. Rishel*

cut out all waste with

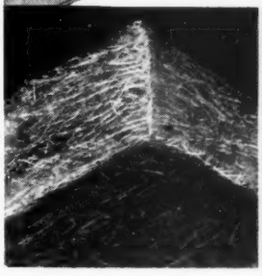
Burton-Dixie PACKAGED PADDING

. . . made exactly to your specifications



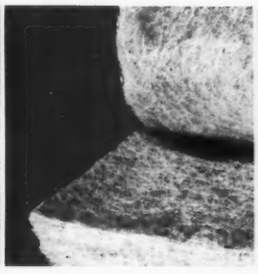
combines sewed padding securely stitched to a burlap skirt.

- **Eliminates two complete operations in your factory**
- **Cuts out all waste of insulator, padding and burlap because Burton-Dixie's sewed padding is made exactly to your specifications**
- **Speeds up your production and assures a uniform finished product**
- **Available in any size or shape**
- **Reduces your inventory to one item only instead of three**



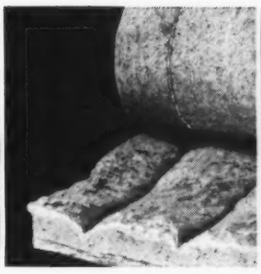
SI-LATEX . . . a combination of interstitched sisal and pure latex, vulcanized together to make an extra strong spring insulator.

- **Laboratory proved to outwear ordinary spring insulators 2 to 1**
- **Eliminates all spring feel . . . cannot cup or hollow out**
- **Available cut to any size or shape . . . plain or stitched to cotton felt**



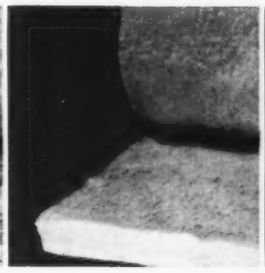
SISAL The finest quality you can buy . . . consisting of only the toughest, whitest sisal fibers available.

- **Cut to any size or shape**
- **Also available in rolls of any width**
- **Loose punch for a soft pad . . . or tight punch for a firmer pad**
- **Loom pad also available for a much firmer pad**



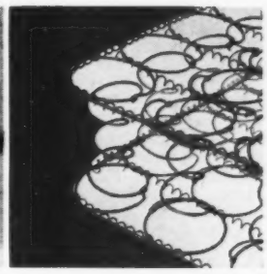
SEWED PADDING Spring insulator and fine quality cotton padding sewed together to save you labor and assure uniformity. For use on all spring constructions.

- **Si-Latex – Cotton. Burton-Dixie's exclusive Si-Latex insulator and cotton padding**
- **Sirex – Ordinary sisal insulator and cotton padding**



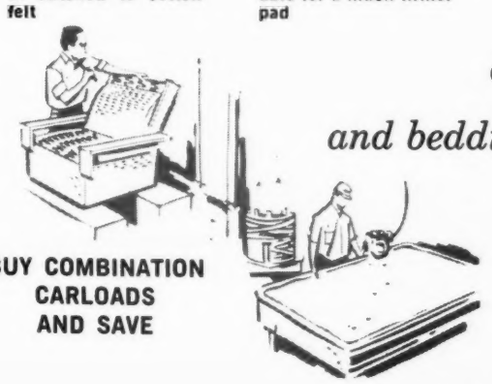
COTTON FELT The finest quality cotton only . . . consisting of high grade staple cotton and linters.

- **Made of 100% all new material**
- **Furnished to any thickness and widths**
- **Cut to any sizes or shapes**



MATTRESS INNERSPRINGS AND CUSHION SPRINGS The finest innerspring units made . . . available in standard and special sizes.

- **Accepted by nationally known bedding manufacturers for more than 60 years**
- **All standard coil counts available**
- **Any gauge wire you prefer**



BUY COMBINATION CARLOADS AND SAVE

one dependable source for your upholstering and bedding needs for over 60 years

Burton-Dixie Corp.

Chicago Plant and Executive Offices . . . 2024 South Racine

Manufacturing Plants in: Lansing • Dallas • Detroit • Denver
Kansas City • Blacksburg • Memphis • Atlanta

FOR DATA CIRCLE FDM NO. 1371

PRACTICAL FACTS ON THE STRUCTURE, IDENTIFICATION BEHAVIOR, AND USES OF WOOD

Here are two comprehensive volumes of invaluable help on the factors important in best selection and working of wood for commercial applications. The books provide practical information on a wide variety of topics—from the cambria of trees, through methods of identifying woods, to explanations of adhesives and descriptions of finishes. They give a thorough understanding of this field, with detailed facts and data on wood structure, defects, properties, behavior, uses etc.

Textbook of WOOD TECHNOLOGY

By H. P. BROWN, A. J. PANSHIN, Assistant Professor of Forestry, Michigan State College, and C. C. FORSAITH, Professor of Wood Technology, New York State College of Forestry.

Vol. 1. Structure, Identification, Defects, and Uses of the Commercial Woods of the United States

626 pages, 322 illus., $9.50

This volume provides practical information on wood anatomy, distinguishing features of various wood species, keys for identification of woods, and much more. The scope of precise data insures a sound, authoritative reference on the structure, identification, major defects, and uses of more than 75 domestic woods. In quick reference form are practical aids that make the identification, inspection, selection, and utilization of woods more accurate.

Here are three Master Keys for wood identification, one based on features visible with the naked eye and hand lens, the second based on minute features, and the third for identification of coniferous woods only. One section provides information on the strength in bending, shock resistance, working and gluing qualities, paint holding ability, durability, stiffness, tendency to split, seasoning qualities, etc. of each species.

Vol. 11. The Physical, Mechanical, and Chemical Properties of Commercial Woods of the United States

761 pages, 163 illus., 45 tables, $12.50

The data on physical properties covers density of wood and how it varies . . . what moisture does to wood in making it shrink or swell, in changing its weight and compressibility . . . how water acts in wood . . . what heat does to wood, and much more. The section on bonding and finishing describes types of adhesion, aspects of the glue line, seven different wood fasteners, and the many kinds of finishes.

Provided are procedures for finding the mechanical properties of a given wood, and explanation of factors that affect the working stresses of wood, different causes of variation in its strength properties, and methods for determining stress in framed structures. Includes an essential outline of the chemical composition of wood, the chemical action of water, salts, acids, alkalies and oxygen on wood, and the thermal composition of wood.

Send check with order to

Book Dept., F.D.M., 608 S. Dearborn
CHICAGO 5, ILLINOIS

M. C.—KEY TO PROFITS
FROM PAGE 35

list of Birn furniture clients indicates that some furniture managers have been "sold," at least.)

Besides the many general areas in a furniture company that can receive benefits from the services of a consultant, as listed above, in addition John Patton cites some specific problems, or pitfalls, that he believes characterize many furniture manufacturers. These pitfalls could be avoided, or problems, solved, with the help of a consultant.

They are: failure to produce furniture which is both appealing *and* cost-saving ("You can't do both," claim too many manufacturers); failure to hire designers with *shop* experience; lack of any data as to specific operation costs; the attempt on the part of many low-quality, high-volume producers to make "customized" furniture using the same machines and labor; and finally, improper jobbing, that is, the making of all furniture parts on the same production basis.

Ideally, a furniture manufacturer should design furniture, says Patton, which combines appeal and work simplification. Design and cost must be considered together. And if the manufacturer hires or retains designers who because of shop experience, know cost and operation, they can create furniture which will both be what the customer wants and which will be cost-saving to the manufacturer. A consultant is capable of determining whether the furniture meets these qualifications, and if not, how it can.

If a consultant finds that the work methods can't be standardized, then something is wrong with the operation or the design, points out Patton. Very often the mistake made is that all parts are produced on the same basis. The manufacturer doesn't realize, until the consultant points it out to him, that, say, one-half of the items can be produced on a high volume basis and the other half, "the special parts," can be treated and produced separately. Thus, by revising jobbing, many components can be production run, reducing costs considerably.

Patton suggests that one way a manufacturer can utilize the services of the consultant is to hand over to him the proposed model of a new piece of furniture for cost analysis. The consultant will analyze which parts can be run on a production basis and what this will cost. He may suggest revisions which will save much money, yet not alter the design visually.

Commenting on other typical furniture industry problems, Patton continues, "It is surprising but very few companies know their cost by product or by operation. The cost factor is of lesser importance to manufacturers producing the higher priced furniture but is very important to those producing commercially priced merchandise. And the latter are those who can really use consulting help."

"Another big mistake of many manufacturers is that they attempt to make high quality, custom-type furniture when their entire equipment is set up and geared for low-quality, high-volume merchandise," adds Mr. Patton. "High quality furniture requires different type workmen, a different work ratio (four to one). In fact, the productivity, inspection system and the entire framework is different." A consultant can show his client proof of this and suggest alternate ways of increasing profit.

As for the argument offered by many manufacturers that an m.c.'s services are too expensive, Patton says there is but one answer, "He can't afford *not* to hire a consultant." The George Fry organization has what it believes to be a unique method of working with clients, a method which is a partial answer to the cost question.

"Basically, our method works like this," he explains. "We go into a plant, conduct work simplification studies, then train their personnel to in turn train their people to set standards. For example, we may spend one or two months laying the groundwork and setting up a training program. Then we go back one week a month to see that the system works smoothly. Such a system has these advantages:

(1) Since we train people to do the work themselves, the usual resentment and prejudice toward outsiders is avoided.

(2) It offers the benefits of a long range system. You don't always make changes overnight. This method allows manufacturers to see for themselves how the system is working out.

(3) Payment for the services can be made over a longer period of time.

Patton concludes by suggesting one final requirement to look for when searching for your consultant. He suggests that the "good" consultant is one who has the acceptance of the labor unions. They must realize he is fair-minded both ways.—*Nancy Ladd*

FABRICS & FIBERS

FROM PAGE 18

styrene types of rubber latex, the butadiene–nitrile laticies, polyvinyl acetate, polyvinylchloride, acrylic polymers, etc. The textile chemist selects the material to be used based on the construction of the fabric, the effects desired, and the end use of the fabric. In one form or another all of the aforementioned materials are used. Each has its appropriate place in textiles today.

In general, upholstery is back coated immediately after weaving. This is done by sewing the individual pieces together in an endless chain and passing the cloth through a coating machine where the thickened water dispersed latex is applied to the back. Excess latex is scraped off with a knife and the fabric is then dried to drive the water from the latex and to vulcanize or otherwise cure the thin elastomeric film produced on the back of the cloth. The cloth is then dyed and finished in the normal manner.

There are three types of coating machines in use today. These are the puddle-knife coater, the roller coater, and the spray coater. Each of these machines has its place. The machine selected is dependent on the fabric construction, the end effects desired, and the type of latex used.

The inventive and styling skill of the furniture and upholstery manufacturers designers, chemists, and engineers has made it possible to produce attractive and excellent quality back coated upholstery fabrics at very economical cost.

FDM acknowledges with thanks the efforts of the technical staff of Sidney Blumenthal & Co. Inc., a Division of Burlington Industries for the resarch and preparation of this article for publication in Mr. Fricker's column.

MANUFACTURERS REPRESENTATIVES

calling on Furniture Manufacturers who are interested in additional lines, are invited to list their names with FDM's LISTING SERVICE.

There is no charge for this service, just send your name, address, territory you cover and types of material, equipment, supplies and service you wish to represent.

We frequently receive requests from suppliers seeking representation—information you furnish will be supplied to them *at their request.* Send *your* listing to:

Listing Service c/o
FURNITURE DESIGN & MANUFACTURING
608 S. Dearborn St., Chicago 5, Illinois

FDM CLASSIFIED ADVERTISING

RATES:
Per line (minimum 5 lines) no display....$ 2.00
Per inch (9 lines)..... 15.00

EMPLOYEES WANTED

DRAFTSMAN-DETAILER

Exp. detailing shop drwgs., material billing cabinet and occasional table production. Permanent with good advancement potential. Midwest location. Starting salary $7,500-$10,000. Give full resume, work, academic exp., ref. Write Box—345 c/o FDM

WANTED Upholstery foreman who can manage and direct approximately forty upholsterers producing nicely styled medium priced chairs. Contact:
JACKSON CHAIR COMPANY
Danville, Kentucky

REPRESENTATIVES WANTED

REPRESENTATION WANTED

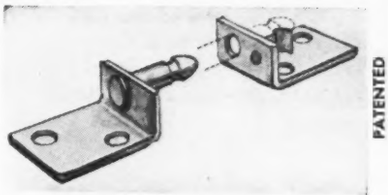
Midwest manufacturer of plastic finishing tips and caps for wood and metal furniture offers profitable additional line to men now calling on the furniture trade. Quality merchandise at competitive prices will make these items a welcome addition to your present lines. P. O. Box 304, Evansville, Indiana.

BUSINESS OPPORTUNITIES

BANKER. Wants to get out of the Veneer Business. Will accept low lease rental, for completely equipped operating modern single-ply 2 lathe unit, with 2 Diehl splicers. Sufficient floor space for plywood operations. Reply to Box 346, c/o FDM.

LOCKS FOR SALE

DOWEL LOCKS REDUCE COSTS BUILD QUALITY



PATENTED

ELIMINATE Drilling, Dowelling, Locks and Levelers
NEW LOW PRICES — Samples on request
VALTRI PRODS. Inc.
542 13TH AVENUE PROSPECT PARK, PA.

MACHINERY FOR SALE

MACHINERY FOR SALE

Billstrom 39-Section Clamp Carrier
WA-50 Onsrud Shaper
No. 890 Diehl Splicer
L. B. Richardson Single End Boring, Chucking & Sawing Machine
Root Style G250 Borer
No. 69 Diehl Veneer Jointer
No. 660 Diehl Glue Jointer
No. 50 Bell Dowel Machine
Sparton Auto Nailer
No. 80 Bell Mortiser, multiple head
No. 276 Mattison 6" Moulder
No. 33 Whitney 32" Double Planer
No. 88 Buss 30" Double Planer
Factory Rebuilt Berthelsen 60" x 80" Two Opening Hot Plate Press
W-240 Onsrud Router
No. 25 Nash 10-Spindle Sander
S-333 Yates-American 49" Endless Bed Sander
No. 202 Mattison Rip Saw
No. 300G Hermance Gang Rip Saw

MONICAL MACHINERY CO.
2020 Bristol Ave., N.W.
Grand Rapids 4, Michigan
Tel: EMpire 1-2668

USED DOWEL MACHINES
All makes and sizes
Factory Rebuilt Hawkers
Hawker Manufacturing Co.
1425 Keowee St., Dayton Ohio

PLYWOOD FOR SALE

OUR SPECIALTY: THIN cut to size fancy face plywood. Hutch backs, end panels, drawer bottoms, etc.
CAROLINA VENEER & PLYWOOD CO.
P. O Box 1292, Florence S. C.

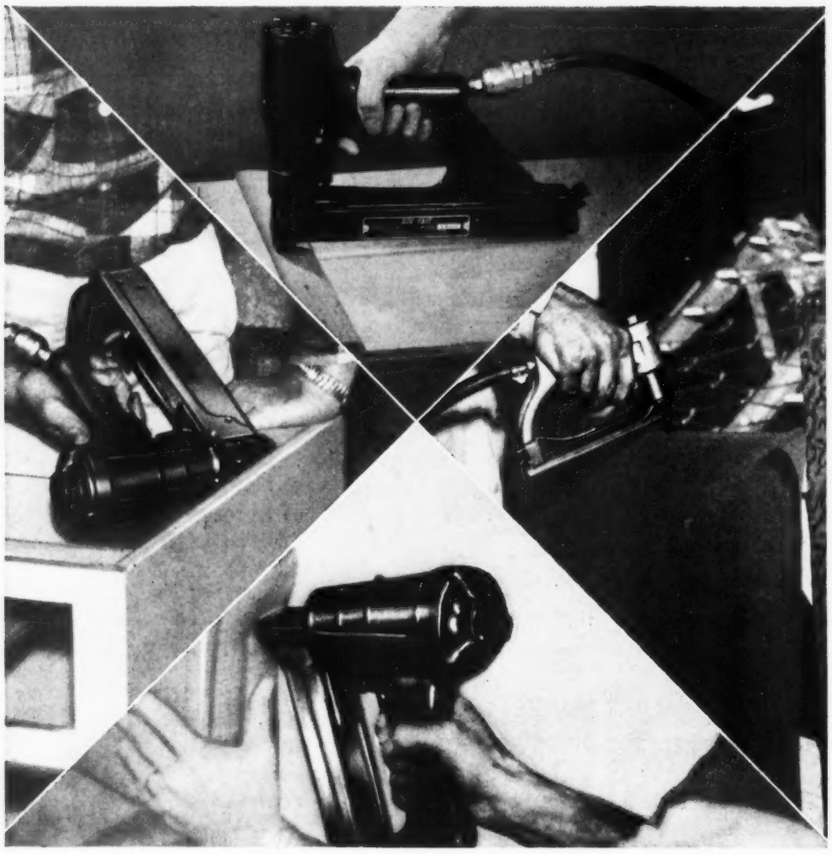
SAFETY SAW GUARDS FOR SALE

SAW ACCIDENTS? ? ?

Now! Dangerous circular table saw injuries eliminated by new amazing visual Brett-Guard patented SEE-THUR safety tool! Device fits all rip saws! Installs easily! Features TRANSPARENT PLEXIGLAS SHIELD. Covers saw blade yet allows FULL VISION and complete accuracy. Send for FREE FOLDER today!
Made only by:
BRETT-GUARD CORP. LOwell 8-2600
ENGLEWOOD, NEW JERSEY

STACKING STICKS

3 cars 4/4 8' #2&Btr. Gum.....45.00
2 cars 4/4 #2&Btr. Ash.....65.00
1 car 4' stickers.....4¢
2 cars 6' stickers.....4¢
Phone or wire order
Galennie Wholesale Lumber
Shreveport, Louisiana



When the tacker matches the job
production goes up...costs go down

There is a model in the comprehensive DUO-FAST line that exactly matches your job . . . and will do it better, faster and at lower cost.

Better because: It gives you perfect control . . . you just position the tacker and press the trigger. A tight-holding staple or brad is driven precisely *where you want it*. And because DUO-FAST gives you such a wide range of staples and brads to choose from . . . a variety of crown widths, points, wire gauges, finishes, and lengths from $\frac{5}{32}$" to $1\frac{1}{2}$" . . . one of which is just right for your job.

Faster because: Air does the work. DUO-FAST tools have an effortless, feather-touch trigger or trip. Operators attain top working speed without sacrificing quality. Jobs are completed 3 to 5 times faster.

Lower cost because: Precision manufacture, plus the DUO-FAST Free Service Policy keeps your DUO-FAST tackers operating at peak efficiency day after day, even under the hardest usage.

Send today for a copy of the new DUO-FAST Manual and see why more DUO-FAST guns are being used today than ever before.

FASTENER CORPORATION 3704-06 River Road. Franklin Park, Illinois

0694

DUO-FAST Staplers Tackers Staples

Everything you need for tacking, stapling and nailing.

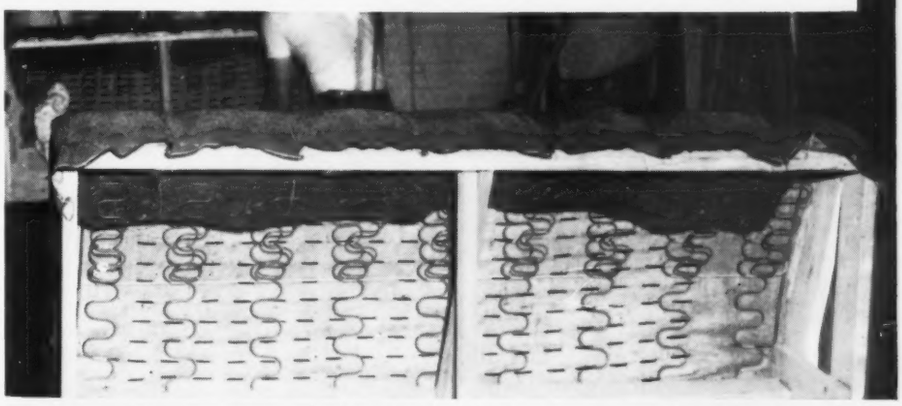
INDEX TO ADVERTISERS

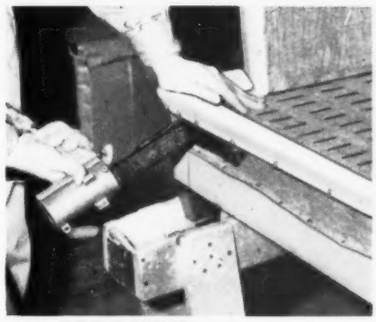
Ace Engineering Company 4
American Steel & Wire Division 6,
Anchor Plastics Co., Inc. 4
Arrowhead Associates 4
Automatic Tubing Corporation 5
Bassick Co., Div. of Stewart-Warner Corp. 2
Bechik Products, Inc. 4
Berger Tube Corporation 47
F. Burkart Mfg. Co., a Div. of Textron, Inc. 11
Burton-Dixie Corporation 63
Buss Machine Works, Inc., Subs. of Greenlee Bros. & Co. 51
Carolina Industrial Plastics, Div. of Essex Wire Corp. 12
Carr Fastener Co., Div. of United-Carr Fastener Corp. ..... Cover II
Clapper's Manufacturing, Inc. 59
Con-Torq Inc., Subs. of North & Judd Mfg. Co. 29
H. P. Cooper & Company 49
J. B. Dawn Products Co. 43
Duo-Fast 66
The Engineered Products Co. 42
Fabricated Lumber Products Co. 58
Fan-Air Systems, Inc. 10
Fastener Corporation 66
Flex-O-Lators, Inc. ..... Cover III
G & S Sales Company 34
The Otto Gerdau Company 47
B. F. Goodrich Company 14, 15
Greenlee Tool Co., Div. of Greenlee Bros. & Co. 55
Handy Button Machine Co. 49
Harodite Finishing Co., Inc. 44
Walter E. Heller & Company 9
IXL Manufacturing Company 45
Keller Products, Inc. 32
Victor J. Krieg, Inc. 18
Lundstrom Laboratories, Inc. 61
Lyon Furniture Mercantile Agency 60
Arthur Marburg Dimension Lumber Co. 44
McMasters, Inc. 34
Middletown Manufacturing Co. 39
Midwest Foam Products Co. 25
Robert E. Miller Co., Inc. 40
Mohawk Furniture Finishing Products, Inc. 43
The Natcolite Company 57
Ohio Rod Products Co., Inc. 37
Onsrud Machine Works, Inc. ..... Cover IV
Pirelli Limited 13
Ply-Curves, Inc. 36
Rainbow Trading Co., Inc. 49
Sackner Products, Inc. 41
Selby Furniture Hardware Co. 37
Spotnails, Inc. 35
Steven Products Company 46
Textile Banking Company 24
Tichnor Brothers, Inc. 46
E. W. Twitchell, Inc. 42
United Shoe Machinery Corp., Powasert Div. 31
United States Rubber Co. 19
United States Steel Corporation 6, 7
Victor Supply Co. 33
Victor Wood Products Co. 36, 40
Wilkenson Manufacturing Co. 25
Williams-Brownell, Inc. 37
Wood Fibreboard Co. 3
Woodworkers' Tool Works, Inc. 47

Perm·A·Lator "AUTOMAGIC"

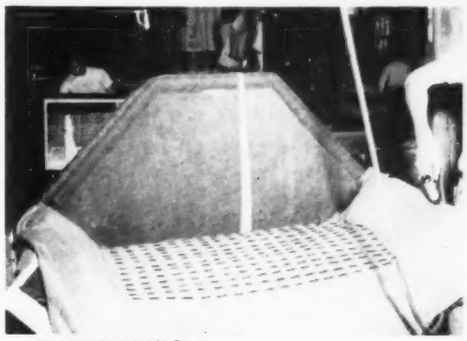
Key to Faster Custom Production

17 SECONDS fully insulates cushion with Perm-A-Lator insulator bags automatically. No "come backs"!



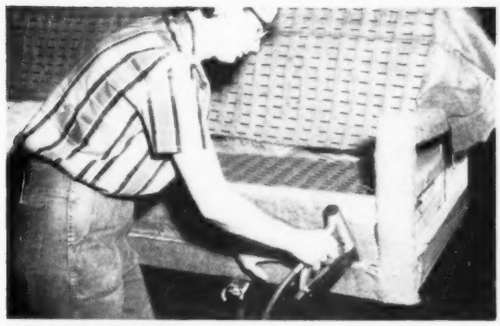


28 SECONDS hog-rings Perm-A-Lator Ring-Fast roll edging on T-constructions. Straighter, firmer edges automatically!



15 SECONDS fully insulates sectional back with Perm-A-Lator Wire Insulators in burlap automatically!

7 SECONDS hog-rings Perm-A-Lator pad to inner spring automatically—prevents "coil feel" permanently.



37 SECONDS fully insulates sofa with Perm-A-Lator Wire insulator pads. Neater backs, flatter decks automatically!

AUTOMATICALLY! . . . pre-built Perm-A-Lator furniture components actually speed up power tool applications, lower costs and save materials. We call it Perm-A-Lator "AUTOMAGIC" because their built-in quality automatically crafts construction that performs better and looks better. They give you the *flexibility* needed for modern custom production automatically . . . with the widest range of pre-fab sizes, shapes and patterns. And anyone can apply them automatically, faster, surer, with fewer rejects or come-backs. See how Perm-A-Lator AUTOMAGICS can speed-up your lines . . . meet your expansion needs for better tailoring and more profitable sales automatically, now!

MAIL TODAY FOR SAMPLES!

Time Check & Quality Test Perm-A-Lator Automagics in your own plant!

TRADE MARK
Perm·A·Lator P L
AUTOMAGICS

Perm-A-Lator is the registered trademark of Flex-O-Lators, Inc., Carthage, Mo., New Castle, Pa., High Point, N.C.

FLEX-O-LATORS, INC., Carthage, Mo.

YES! Please send illustrated literature on the following Perm-A-Lator Products:

- ☐ Wire Insulators Woven in Burlap
- ☐ Cushion Bags
- ☐ Perm-A-Lator Edgings
- ☐ Zip-Fast Inner Roll and Edging
- ☐ Corner Springs

NAME_____

FIRM_____

ADDRESS_____

CITY_____ STATE_____

FOR DATA CIRCLE FDM NO. 1383

3 MEN

3 MACHINES

1 DRAWER FRONT

1. Operator puts one end of drawer front or drawer back in dovetailer and makes his cut.

2. Operator puts other end in dovetailer and makes second cut.

3. Operator takes drawer front to saw.

4. Operator positions drawer front on saw and cuts slot for drawer guide.

5. Operator takes drawer front to boring machine.

6. Operator puts drawer front in boring machine and bores holes for drawer pulls.

1 MAN...

1 ONSRUD

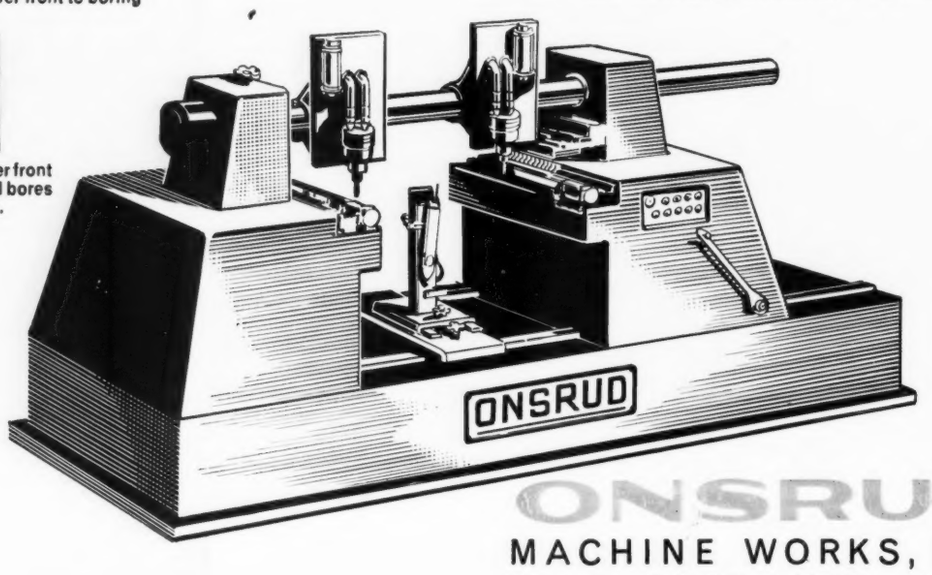
DOUBLE END DOVETAILER

4 DRAWER FRONTS

Now one operator can dovetail both ends of a piece, cut a slot for a drawer guide and bore holes for the drawer pulls, all simultaneously with the touch of a button. Machine can be set to stack finished work pieces at operators feet automatically. Optional accessories for cutting drawer guide slot and for boring drawer pull holes can be ordered with the machine or added at any time later. They can be quickly detached or simply turned off where guides or pulls are not used. A unique work stop (built on the turret principle) permits complete set ups for 4 different widths in 52 seconds. Saves set up time on every job. The accuracy of the dovetail cut speeds assembly of parts, reduces sanding—bonus cost saving. In field tests the Onsrud Double End Dovetailer increased production 400% and more, turning out finer quality work with less operator fatigue.

Send this note to Sales Manager, Wood Working Division: "Regarding your Double End Dovetailer, we dovetail _____ pieces a month, our estimated savings???"

You'll have a "Profit Estimate" and Dovetailer Brochure in 24 hours.



ONSRUD

MACHINE WORKS, INC.

7720 N. LEHIGH, NILES, ILLINOIS

FOR DATA CIRCLE FDM NO. 1404